FURUNO

INSTALLATION MANUAL

VHF RADIOTELEPHONE

MODEL FM-8800D/8800S

FURUNO ELECTRIC CO., LTD.
NISHINOMIYA, JAPAN

PRINTED IN JAPAN

(Elemental Chlorine Free)

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⚠ SAFETY INSTRUCTIONS

⚠ WARNING

Hazardous voltage.
Can shock, burn or cause serious injury.

Do not work inside the equipment unless totally familiar with electrical circuits.

Do not approach the antenna closer than 0.9 m (MPE by FCC) when it is transmitting.

The antenna emits radio waves which can be harmful to the human body.

	RF power density on antenna aperture	Distance	Description required by
FM-8800S	100 W/m^2	0.11 m	IEC 60945
	10 W/m^2	0.33 m	IEC 60945
	2 W/m^2	0.9 m	MPE by FCC
FM-8800D	100 W/m^2	0.11 m	IEC 60945
	10 W/m^2	0.33 m	IEC 60945
	2 W/m^2	0.9 m	MPE by FCC

(MPE: Minimum Permissible Exposure)

Turn off the power at the mains switchboard before beginning the installation. Post a warning sign near the switchboard to indicate that power should not be applied while the equipment is being installed.

Electrical shock, serious injury or fire can result if the power is not turned off or is applied while the equipment is being installed.

⚠ CAUTION

Attach securely protective earth to the ship's body.

The protective earth (grounding) is required to the AC/DC power supply unit to prevent electrical shock.

Confirm that the power supply voltage is compatible with the voltage rating of the equipment.

Connection to the wrong power supply can cause fire or equipment damage. The voltage rating appears on the label at the rear of the display unit.

Observe the compass safe distance to prevent deviation of a magnetic compass.

	Standard compass	Steering compass
FM-8800S	1.45 m	0.90 m
FM-8800D	1.45 m	0.95 m
IF-8810	0.85 m	0.55 m
IF-8820	0.75 m	0.50 m
HS-2003	1.50 m	0.95 m
HS-8800	0.40 m	0.30 m
RB-8800 (W/HS-8800)	1.20 m	0.80 m
RB-8810 (W/HS-8800)	1.50 m	1.00 m
PR-240-CE	0.90 m	0.60 m

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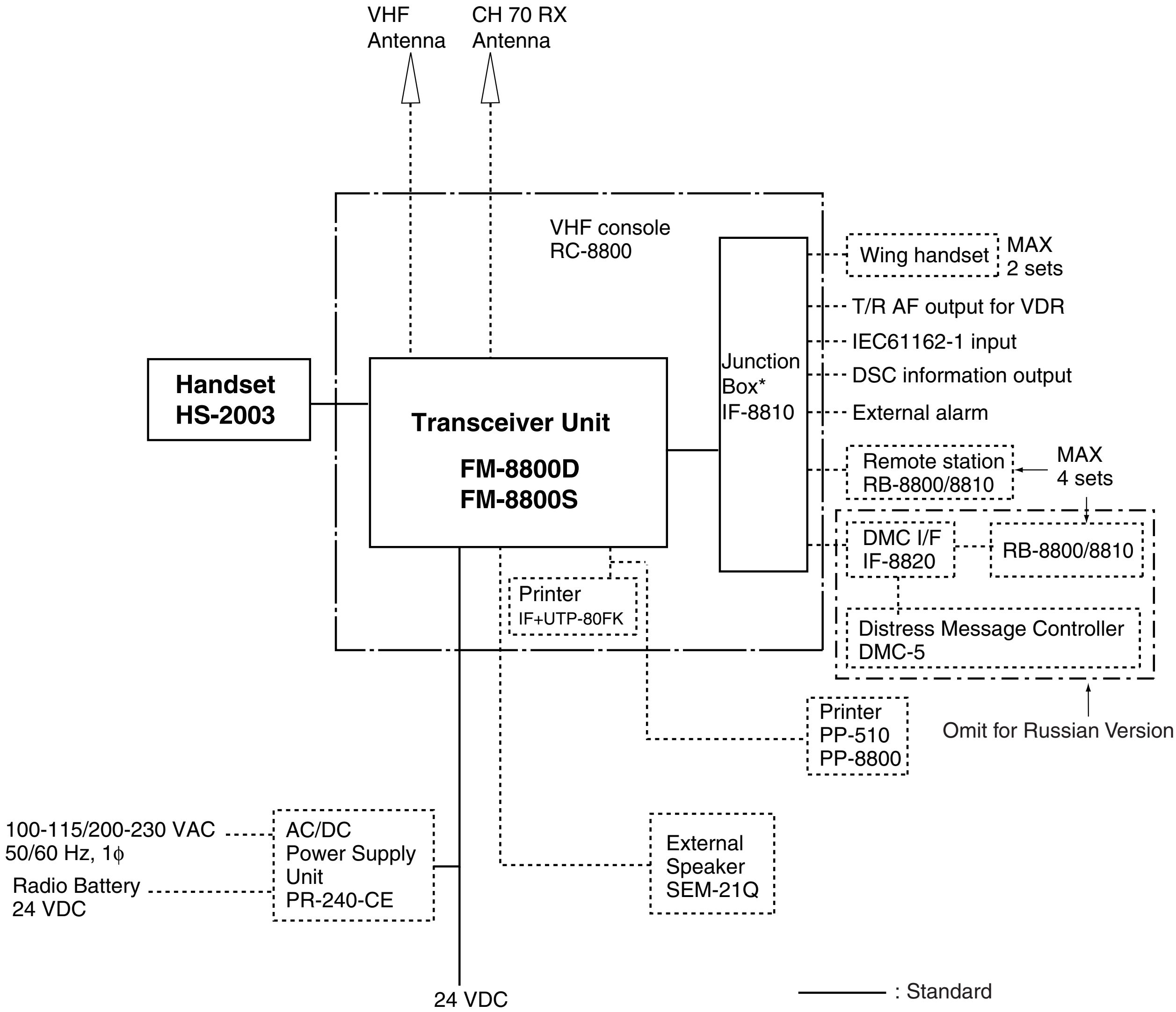
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SYSTEM CONFIGURATION



Category of units

Unit	Category
Antenna	Exposed to weather
All other units	Protected from weather

*: Option for FM-8800S/D-N

EQUIPMENT LISTS

Standard Supply

	Name	Type	Qty	Code No.	Remarks
1	Transceiver Unit	FM-8800D-E-A FM-8800D-E-N FM-8800D-F-A FM-8800D-F-N FM-8800S-E-A FM-8800S-E-N FM-8800S-F-A FM-8800S-F-N FM-8800S-R-A FM-8800S-R-N	1	—	D: Duplex S: Simplex E: With handset HS-2003 F: With microphone DM-2003-F A: With IF-8810 N: No IF-8810 R: Russian version
2	Accessories*	FP05-05700	1	000-054-228	For E-type Handset HS-2003, Hanger FP05-05510, Others FP05-05511
		FP05-05710		000-054-156	For F-type Microphone DM-2003-F
3	Junction Box	IF-8810	1	—	For A-type
4	Installation Materials*	CP05-09900	1	000-054-227	Power cable 05S9371, CP05-09901
5	Spare Parts*	SP05-05501	1	005-377-820	

Standard Supply for VHF Console

	Name	Type	Qty	Code No.	Remarks
1	VHF Console	RC-8800-SN RC-8800-DN RC-8800-SA RC-8800-DA	1	—	D: Duplex FM-8800D S: Simplex DM-8800S N: No printer A: With printer & I/F board
2	Installation Masteries*	CP05-10201	1	005-371-850	
3	Accessories*	FP05-05800	1	000-054-372	Handset HS-2003 & Handset hanger FP05-05510
5	Spare Parts*	SP05-05501	1	005-377-820	

*: See lists at the end of this manual.

Optional Equipment

Name	Type	Code No.	Remarks
Flush Mount Kit	OP05-102	000-054-120	
Junction Box	IF-8810	—	W/ Screw 5x20 4 pcs.
DMC Interface	IF-8820	—	No use for Russian version
Remote Station	RB-8800-15 (W/ 1.5 m Cable)	—	·FP05-05701*, ·Handset HS-8800, ·Hanger W/DIST. button HG-8800
	RB-8800-20 (W/ 2 m Cable)		
	RB-8810-15 (W/ 1.5 m Cable)	—	·FP05-05511*, ·Handset HS-8800, ·Hanger HG-8810
	RB-8810-20 (W/ 2 m Cable)		
Handset	HS-8800-15	000-054-230	W/ 1.5 m Cable
	HS-8800-20	000-054-171	W/ 2 m Cable
	HS-8800-W-35	000-054-287	Waterproof
	HS-2003-15	000-054-223	W/ Cable 1.5 m
	HS-2003-20	000-XXX-XXX	W/ Cable 2.0 m
	HS-2003-50S	000-XXX-XXX	W/ Straight cable 5.0 m
	HS-6000FZ11	000-135-072	
Handset Hanger	HG-8800	000-054-229	For HS-8800
	HG-8810	000-054-231	For HS-8800
	FP05-05510	005-951-790	For HS-2003
	AP-102	000-580-019	For HS-6000FZ11
Loudspeaker	SEM-21Q	000-144-917	
Dynamic Mic. Set	OP05-57	000-045-775	Handset HS-6000FZ5, Receptacle RDB-VHF(B), Hanger AP-102
Carbon Mic. Set	OP05-58	000-045-776	Handset HS-6000FZ6, Receptacle RDB-VHF, Hanger AP-102
Handset set	OP05-42	000-045-778	Handset HS-6000FZ11, Receptacle RDB-VHF(B), Hanger AP-102
Mic. Receptacle Box	RBD-VHF (B)	000-056-094	
Microphone	DM-2003-F	005-377-760	
Printer	PP-510	—	
Printer Interface	IF-8500	—	
AC-DC Power Supply	PR-240-CE	—	
Antenna Material	AP05-00800	000-057-721	Whip antenna FAB-151D, Mounting plate 4-310071, Coax. Cable 5D-2V 10m, Connector M-P-5 2 PCS
	AP05-00810	000-057-722	Whip antenna RA106, Mounting plate RA115, Coax. Cable 05S9104 5m
	AP05-00900	000-057-739	Whip antenna 396-1, Mounting plate 4187
	AP05-01000	000-054-123	Whip antenna FAB-151D, Mounting plate 4-310071, Connector M-P-7 2 PCS

*: See lists at the end of this manual

Name	Type	Code No.	Remarks
Antenna Material	AP05-01100	000-054-224	Whip antenna 150M-W2VN, Coax. Cable 5D-2V 10m, Connector M-P-5 2 PCS
	AP05-01200	000-054-232	Whip antenna FAB-151D, Mounting plate 4-310071, Coax. Cable 5D-2V 10m, Connector M-P-5 & M-P-7
	AP05-01210	000-054-233	Whip antenna FAB-151D, Mounting plate 4-310071, Coax. Cable 5D-2V 20m, Connector M-P-5 & M-P-7
Signal Cable	05S0309 *10M*	000-106-043	10m
	05S0309 *20M*	000-106-044	20m
	05S0309 *30M*	000-106-046	30m
	05S0309 *40M*	000-106-047	40m
	05S0309 *50M*	000-106-048	50m
Twisted Cable	CO-SPEVV-SB-C 0.2x2P	000-111-680	5m
		000-120-792	10m
		000-120-793	15m
		000-120-794	20m
		000-120-214	30m
VHF Console Kit	RC-8800-N-75BG	000-054-125	Without Printer
	RC-8800-A-75BG	000-054-126	With Printer
Printer	PP-8800	-	W/ power cable
Emergency lamp	EMG-1T	000-138-378	For rack console, cable attached

1. MOUNTING

Transceiver Unit

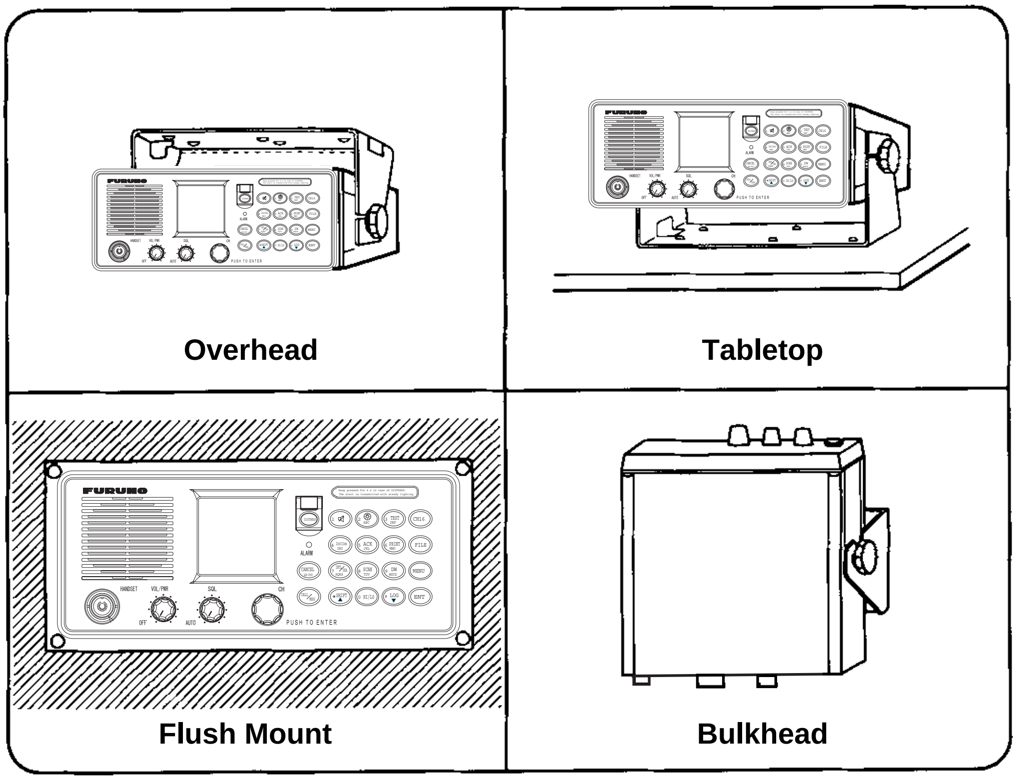
General mounting considerations

Determine the mounting location for the transceiver unit considering operator convenience, proximity to the power source and the ground location. Keep these and the following points in mind when selecting a mounting location.

- Locate the unit in a place free of water spray and water splash.
- Keep the unit out of direct sunlight because of heat that can build up inside the unit.
- Leave a little slack in cables to allow a service technician to move the radio from its usual location with the cables connected. This lets him make tuning and other adjustments on a “live” set.
- Do not install the unit where flammable gases are stored.
- Select a well-ventilated area.
- Ensure the mounting location is strong enough to support the weight of the unit (approx. 6 kg) under the condition of continued vibration normally encountered aboard the vessel. If necessary, reinforce the mounting area with a doubling plate or lining block.
- Leave sufficient space at the sides and rear of the unit for maintenance and service purposes and to provide for circulation of cooling air. See outlines drawings at the back of this manual.
- **For flush mounting,** select a location where the LCD can be easily viewed.
- The transceiver unit will affect a magnetic compass if placed too near the compass. Observe the compass safe distance to prevent deviation of a magnetic compass, referring to page “ i ”.

Note: Take great care not to press the DISTRESS switch during the installation. If you accidentally press the switch, immediately turn off the equipment and contact appropriate authority by telephone.

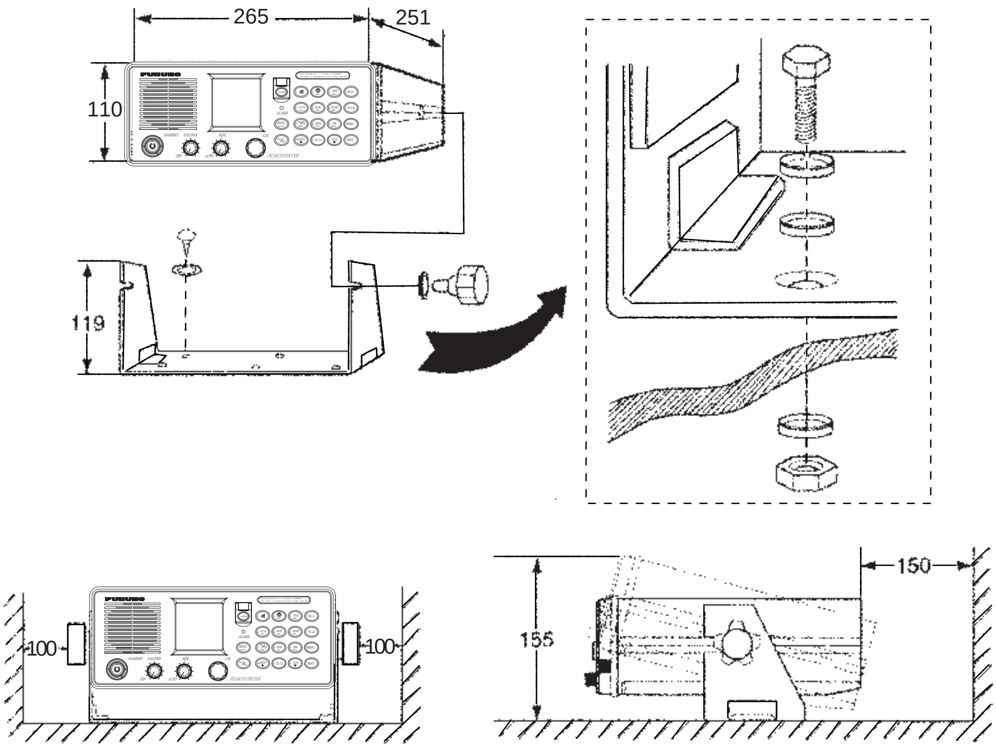
Overview of mounting methods



Overview of mounting methods

Mounting procedure for tabletop, overhead and bulkhead mounting

1. Using the hanger as a template, mark fixing holes in the mounting location.
2. Fix the hanger to the mounting location with self-tapping screws and washers (supplied). (For added support, use nuts, bolts and washers instead of self-tapping screws.)
3. Screw the knob bolts with washers into the transceiver unit.
4. Set the transceiver unit to the hanger and tighten knob bolts.



- All dimensions in millimeters.
- Leave sufficient space at the sides and rear of the unit to provide easy access for maintenance and service.

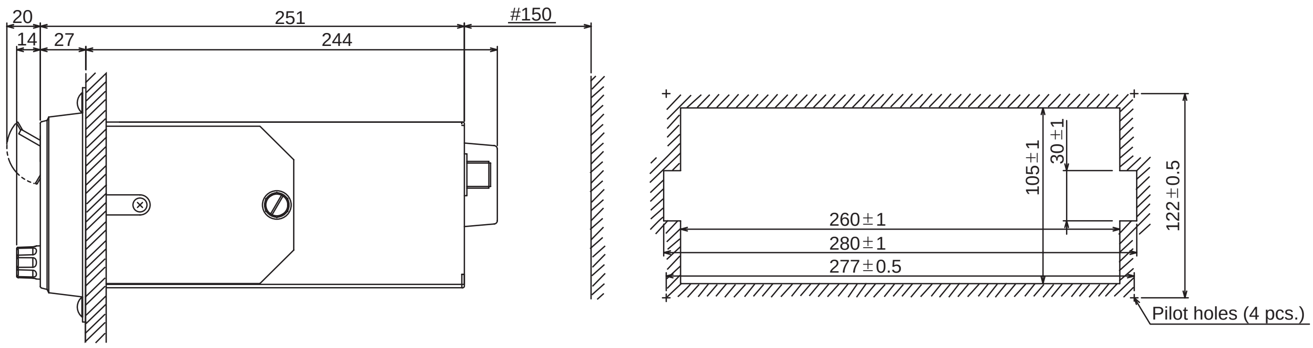
Mounting dimensions for tabletop, overhead and bulkhead mounting

Mounting procedure for flush mount (option)

Requires optional flush mount kit OP05-102 (Code No. 000-054-120). Prepare a cutout in the mounting location whose dimensions are as shown in the figure below.

Flush mount kit OP05-102

	Name	Type	Code No.	Qty
1	Mounting plate	05-093-1211	100-323-160	1
2	Self-tapping screw	5x20	000-802-081	4
3	Hex screw	M8x16	000-882-075	2



Mounting dimensions for flush mount

VHF Antenna

The antenna requirements

Any good quality antenna meeting the requirements shown below may be used. A high-gain antenna is preferable.

- Frequency range: 155 to 164 MHz
- Impedance: 50 ohms
- Polarization: Vertical
- Handling power: 30 W/ min
- Quality: Able to withstand marine environment

Mounting considerations

- The antenna should be well separated from nearby antennas, masts, and other interfering objects.
- The higher the antenna is mounted above the horizon, the further the communications range.

Mounting procedure

The basic mounting procedure for antennas supplied by FURUNO is as follows, however consult appropriate outline drawing for details.

1. Fasten the antenna bracket to the stanchion.
2. Set the antenna to the antenna bracket and tighten bolts.
3. Screw the coaxial cable plug into the antenna.

CH70 RX Antenna

The antenna should be well separated from nearby antennas, masts, and other interfering objects.

The mounting procedure is the same as that for the VHF antenna, however consult appropriate outline drawing for details.

Handset Hanger

The handset hanger can be mounted at the left side of the transceiver unit. The mounting location should provide easy access to front panel controls while operating the handset. Also, the length of the standard handset cable is 50 cm, so locate the handset hanger within 50 cm of the unit. (Longer cables are available optionally.)

Power Supply (option)

For Convention vessels, both AC and DC power must be fed to the FM-8800D/8800S, via an AC/DC power supply. When AC input fails, DC power is supplied. FURUNO can supply an AC/DC power supply unit, the PR-240-CE.

Mounting considerations

When selecting a mounting location, keep in mind the following points.

- Select a location which provides adequate ventilation.
- The location must be clean and dry.
- The mounting location must be able to support the weight of the unit (14.5 kg) under the continued conditions of vibration normally encountered aboard the vessel. If necessary, reinforce the mounting location.
- The PR-240-CE will affect a magnetic compass if it is placed to near the compass. Observe the compass safe distance to prevent deviation of a magnetic compass, referring to page “ i ”.

Mounting

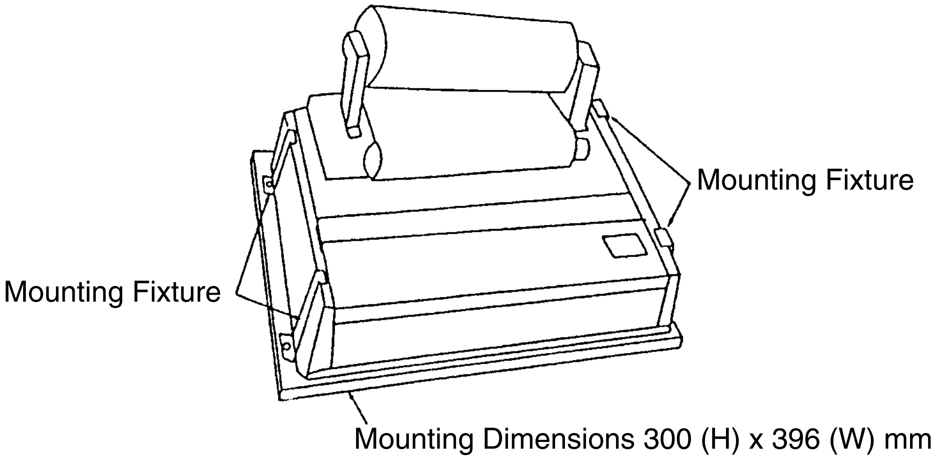
Refer to outline drawing.

Printer (option)

Printer PP-510

To mount the printer, refer to the printer outline drawing at the back of this manual.

1. Select a flat surface.
2. Fix the mounting base to the mounting location with four screws (supplied).
3. Lay the printer on the top of the mounting base and fasten it with the mounting fixtures (two at each side and one at rear).



Mounting of Printer PP-510

Printer PP-8800

The printer PP-8800 is flush-mounted in a panel. Refer to the outline drawing at the back of this manual.

1. Make a cutout of 208(w) x 118(h) mm.
2. Set the printer and fix it with four self-tapping screws (4x16).

Printer Interface (option)

The printer interface IF-8500 is required for the printer PP-510 which is commonly used with the FM-8800D/S and other MF/HF radio communication equipment. To mount the unit, see the outline drawing at the back of this manual.

External Loudspeaker (option)

The external loudspeaker can be installed on a tabletop, the overhead or a bulkhead. Fasten the loudspeaker to the mounting location with self-tapping screws, or nuts, bolts and washers. For mounting dimensions, see the outline drawing at the back of this manual.

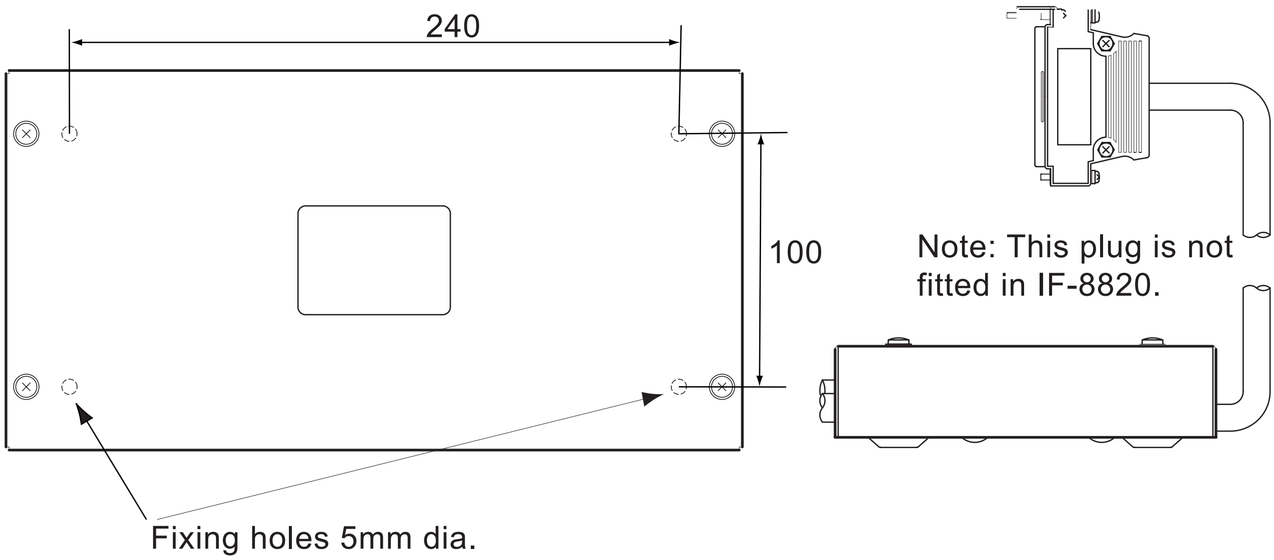
Junction box IF-8810/ DMC interface IF-8820

Note: DMC interface IF-8820 is not used for Russian version.

To install the remote box RB-8800/RB-8810, wing handset, etc., the junction box IF-8810 is required. Install the junction box near the transceiver unit. Approx. 3 m cable is preattached to the junction box to connect to the transceiver unit.

To connect Furuno’s distress message controller DMC-5, the DMC interface IF-8820 (option) is required.

1. Open the cover.
2. Mount the unit with four self-tapping screws (5x20).



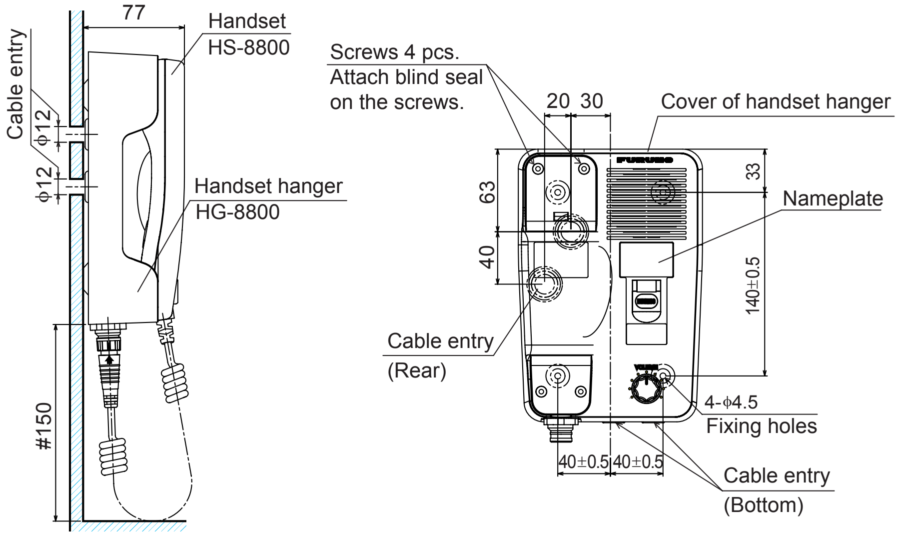
Mounting the junction box/DMC interface

Remote station RB-8800/RB-8810 (option)

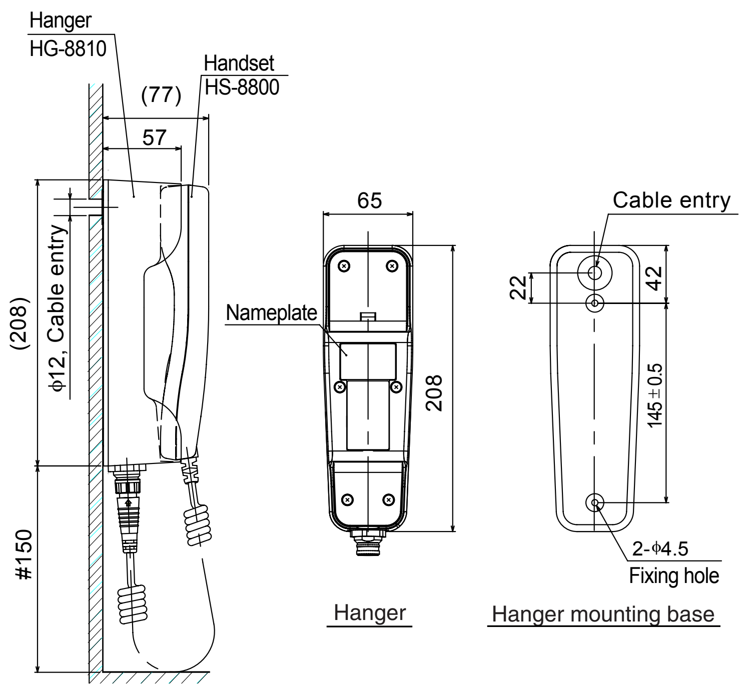
Up to four remote stations can be connected in a daisy chain.

Note: For the remote station RB-8800, there are two method of cable entry: bottom-side entry and rear-side entry. For rear-side entry, make one or two holes of more than 12 mm diameter. For last station in the daisy chain, just one cable entry hole is needed.

1. Remove screws on the handset hanger (four for RB-8800, six for RB-8810).
2. Remove upper chassis of the hanger.
3. Mount the base of the hanger to a bulkhead with self-tapping screws 4x20 (four for RB-8800), or 4x16 (two for RB-8810).
4. After connecting cables, assemble the remote station.
5. For RB-8800, attach blind seals on the screws.



Remote station RB-8800

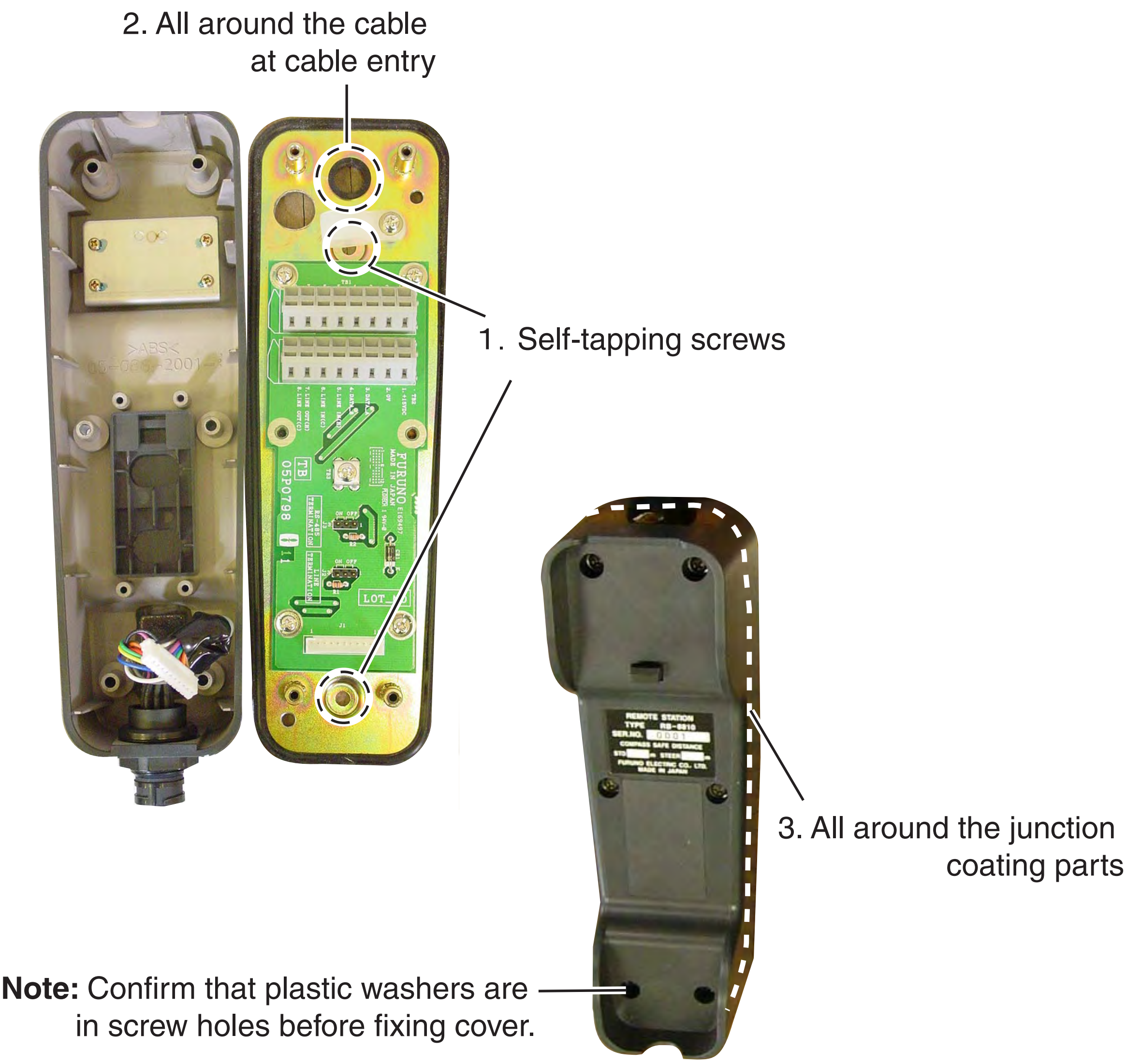


Remote station RB-8810

Outdoor mounting of RB-8810

Remote station RB-8810 with waterproof-type handset HS-8800-W-35 can be mounted outdoors. The hanger should be coated as directed below with silicone sealant for waterproofness.

1. Fix the mounting base with self-tapping screws. Coat exposed part of these screws with silicone sealant.
2. Attach the cable from the transceiver unit or junction box. Coat cable around cable entrance with silicone sealant
3. Fix the cover of the handset hanger. Coat junction between mounting base and cover with silicone sealant.



VHF console

Install the rack console where the equipment can be easily operated, checked and serviced. Consult with shipyard personnel and ship's officer-in-charge to determine best location. The location must satisfy the following points:

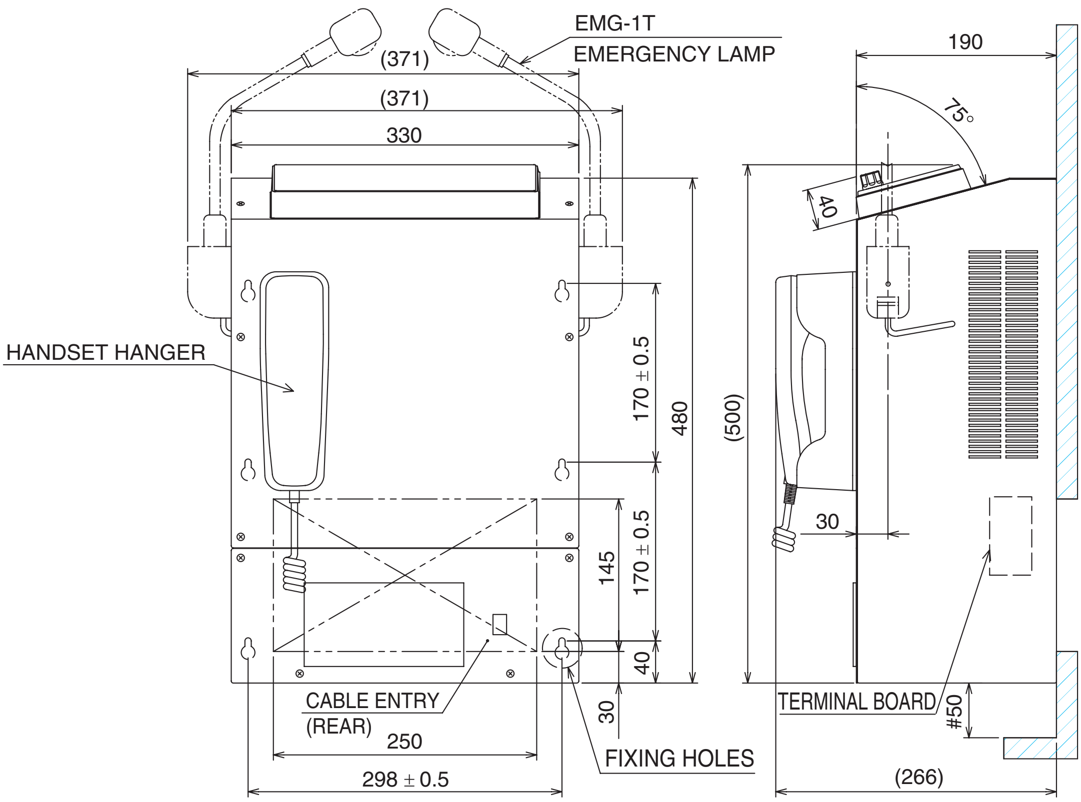
- Select a location where controls can be easily operated.
- Select a location where shock and vibration are minimal.
- Locate the console away from water splash and rain.
- The temperature and humidity of the location should be both stable and moderate.

Fixing

1. Ask shipyard personnel to tighten six M5 nuts or six M5 bolts to the fixing holes (on the wall), referring to the outline drawing at the back of this manual.
2. Detach the cover assembly from the console.
3. Hang VHF console on bolts.
4. Screw the console with the bolts or nuts tightly.
5. Attach the cover assembly to the console.

Note: When you connect wires as soon as attaching console, refer to paragragh 2-10.

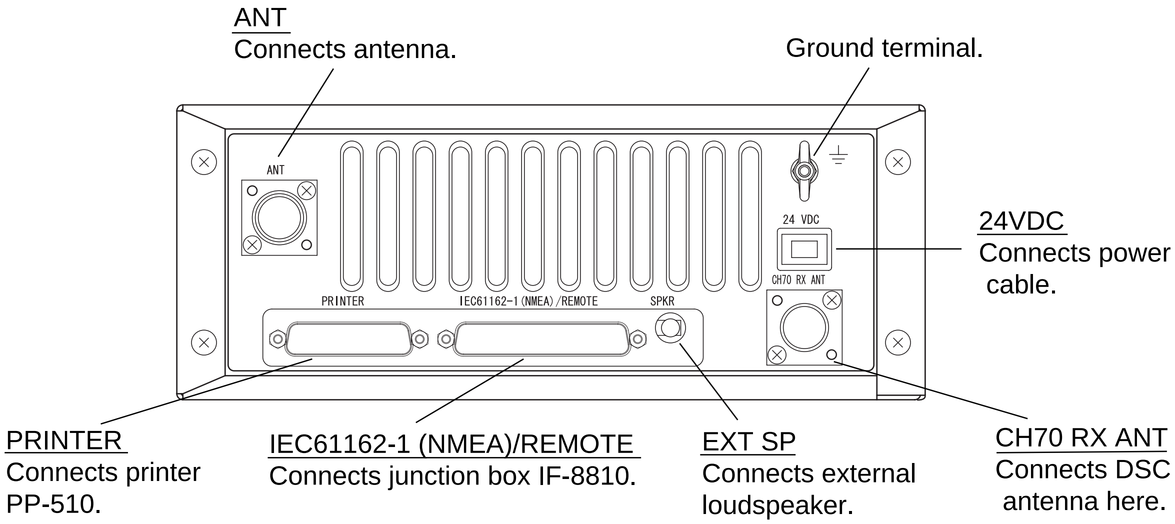
6. Attach the handset hanger with two screws.
7. To attach the optional emergency lamp, connect the cable to the terminal board, and then attach the lamp to the console. Refer to the interconnection diagram and out line drawing.



2. CONNECTIONS

Overview

The figure below shows where to connect various equipment at the rear of the transceiver unit.



FM-8800D/8800S, rear view

Connection of Power Supply

Convention vessels, 100/220 VAC ship's mains

Convention vessels must supply both AC and DC power to the FM-8800D/8800S, via an AC/DC power supply unit. Both AC and DC are supplied by the AC/DC power supply unit, and when AC input fails DC power is activated.

Connect the radio battery to the DC IN terminal on the PR-240-CE. Connect the AC ship's mains to the AC IN terminal on the PR-240-CE.

Radio battery (24 VDC)

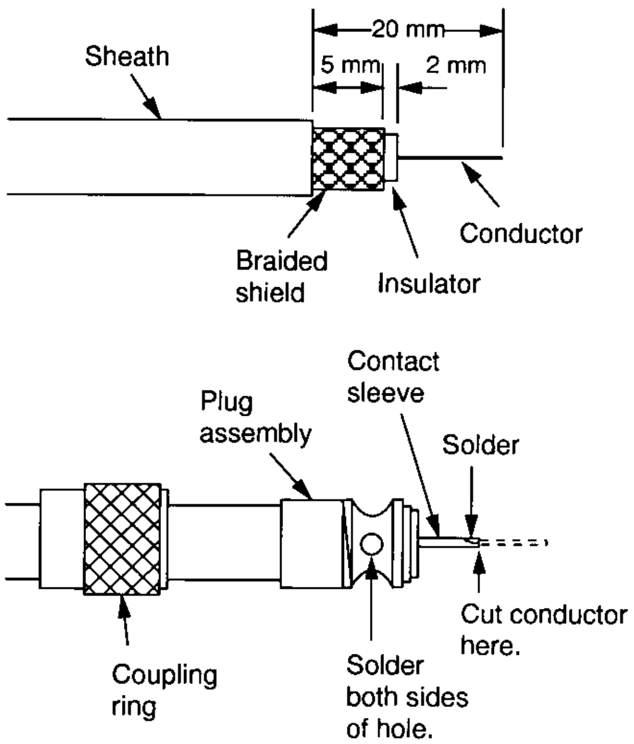
Attach the connector supplied to the power cable and plug it into the 24VDC connector at the rear of the transceiver unit. Connect the wire ends to the radio battery line.

Connection of VHF Antenna

The VHF antenna is connected to the transceiver unit with a 50 ohm coaxial cable, type 5D-2V. Be sure to leave some slack in the cable for future service and maintenance.

Lay the coaxial cable and attach an M-type plug to the cable (if necessary) as follows.

1. Remove the sheath by 20 mm.
2. Bare 13 mm of the center conductor. Trim braided shield by 5 mm and tin.
3. Slide coupling ring onto cable.
4. Screw the plug assembly on the cable.
5. Solder plug assembly to braided shield through solder holes. Solder contact sleeve to conductor.
6. Screw coupling ring into plug assembly.
7. Screw the plug into the ANT connector at the rear of the transceiver unit.



How to attach the M-type plug to the coaxial cable

Connection of DSC Antenna

The DSC antenna is connected to the transceiver unit with a 50 ohm coaxial cable, type 5D-2V. Attach an M-type plug to the cable (if necessary) as shown an page 2-2. Screw the plug into the CH70 RX ANT connector at the rear of the transceiver unit.

Connection of Handset

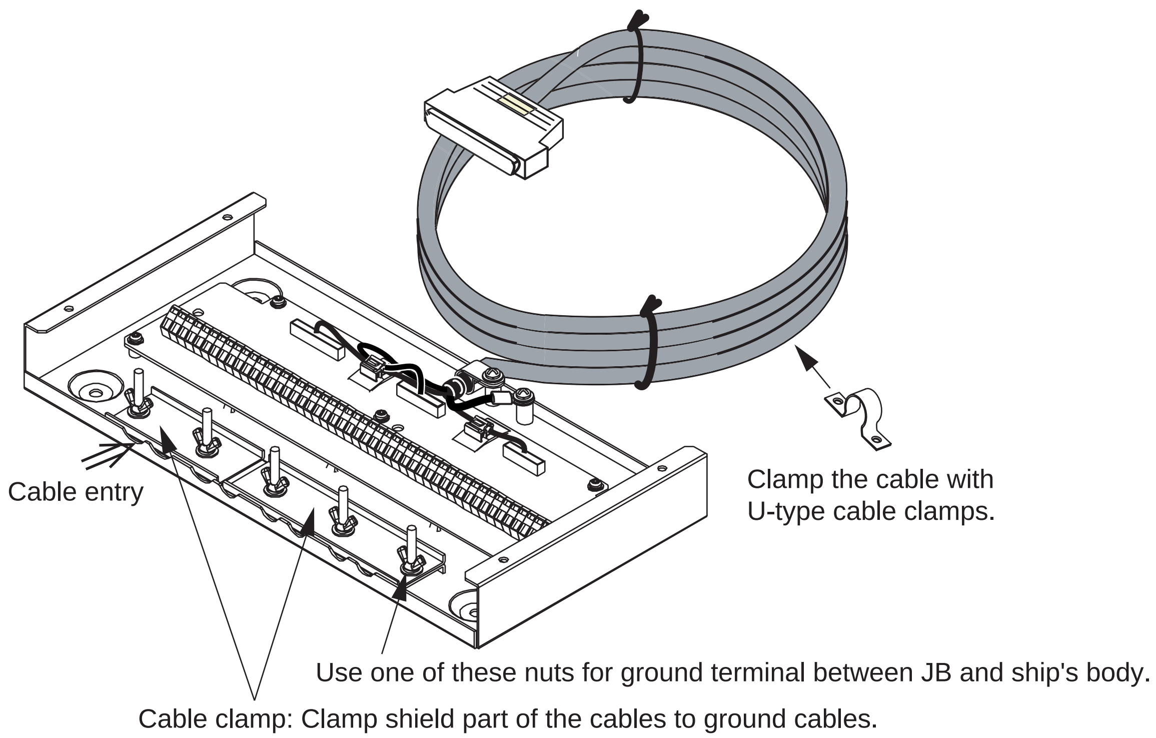
Connect the handset cable to the HANDSET connector on the front panel.

Grounding the Transceiver Unit

Fasten a ground wire (local supply) between the GND terminal at the rear of the transceiver unit and ship's hull (or ground bus).

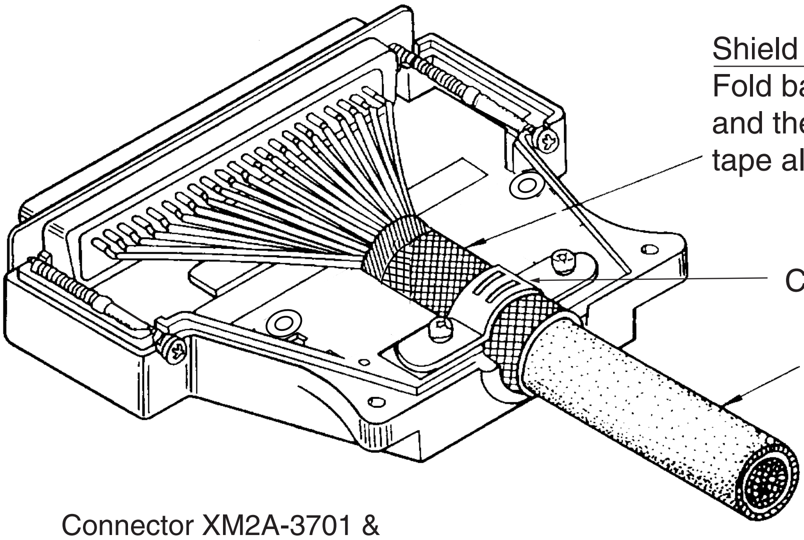
Connecting the Junction Box

The junction box is required to connect a remote station, wing handset, etc. The cable to be connected with the transceiver unit is prefitted on the junction box at the factory. For connection of other cables, see the interconnection diagram.



Connecting the Remote Station without the Junction Box

The remote station (or DMC Interface, Mic. Receptacle box, etc) can be connected directly to the transceiver unit, using the D-sub connector supplied as installation materials.
Attach the connector to the cable as follows.



Attachment of connector

When the handset HS-2003 is not connected to the Transceiver unit

When the handset HS-2003 is not connected to the transceiver unit, i.e.,always the remoted handset is used, the following modification is necessary.

1. Dismount the cover of the transceiver unit by removing four screws at the rear panel and two screws at the side.
2. Dismount the bottom cover by removing seven screws.

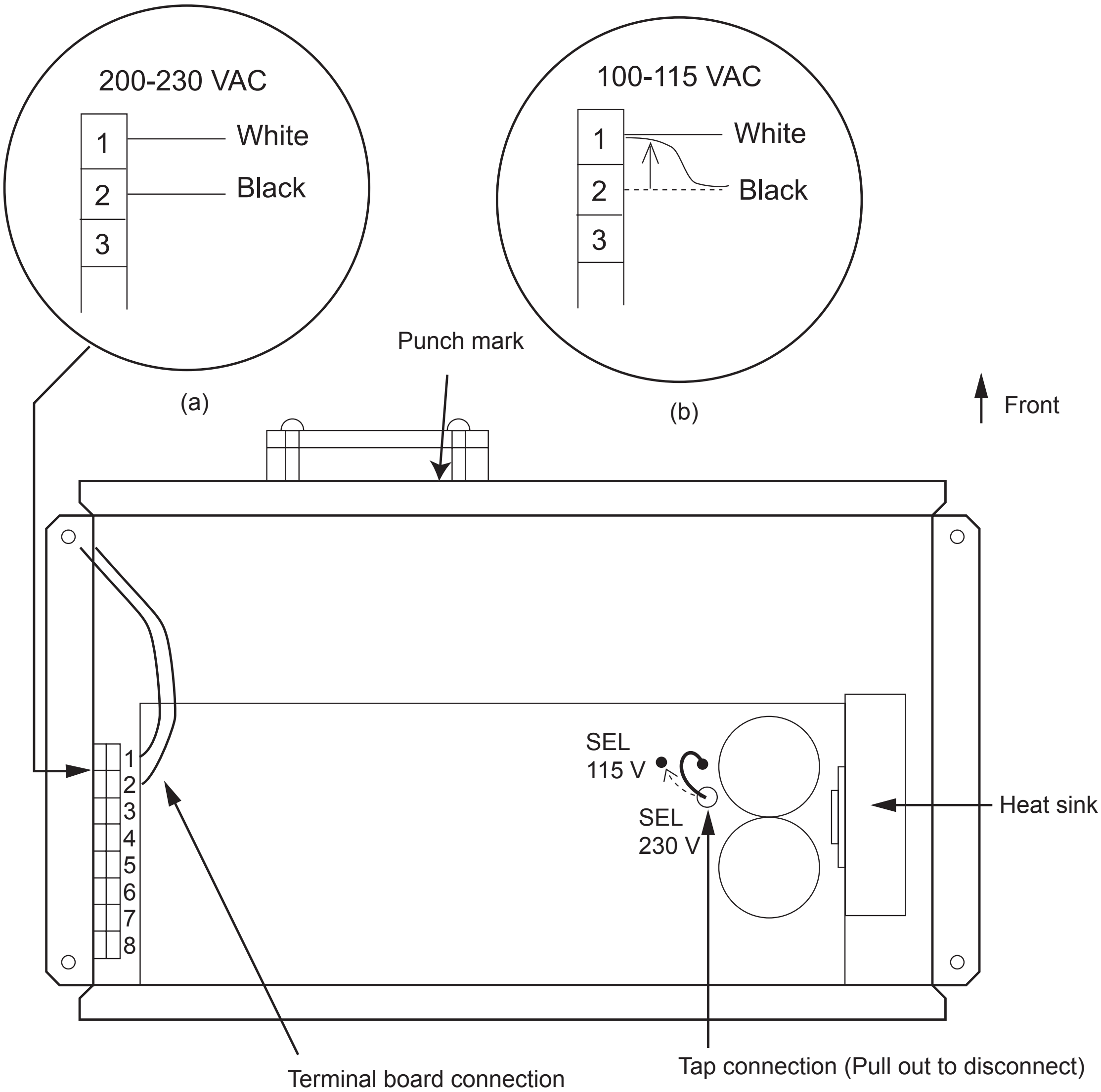


3. Shorten between #1 and #2 of J15. The handset line of the HANDSET port becomes always “ON HOOK”.
4. Assemble the unit.

Connection of AC/DC Power Supply Unit PR-240-CE

The power supply PR-240-CE is shipped ready for connection to a 200-230 VAC ship's mains. If the ship's mains is 100 VAC – 115 VAC, change the tap connection and terminal board connection as below. Attach label supplied as accessories to the punch mark in the front panel according to the ship's mains.

Ship's mains	Tap connection	Terminal board connection #1 & #2
100-115 VAC	SEL 115 V	b
200-230 VAC	SEL 230 V	a



Top view of AC/DC power supply unit (cover removed)

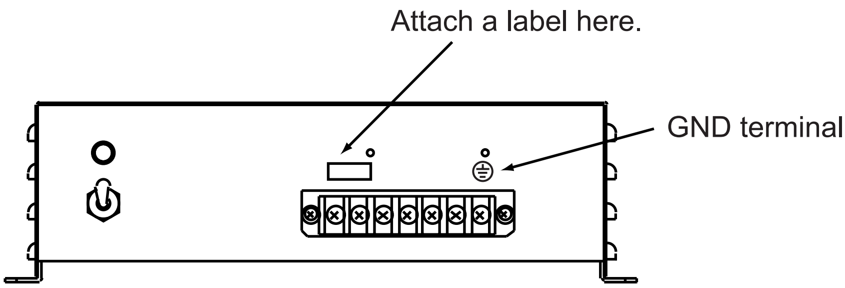
Protective earth

Connect IV-2.0sq wire between ship’s superstructure and the ground terminal on the PR-240-CE.

⚠ CAUTION

Attach protective earth securely to the ship's body.

The protective earth (grounding) is required for the AC/DC power supply unit to prevent electrical shock.

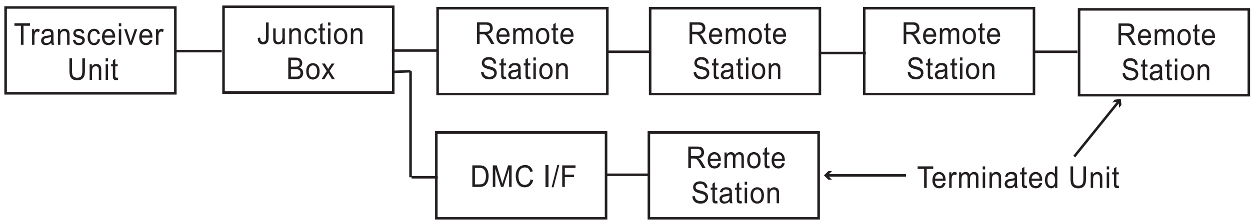


PR-240-CE Front panel

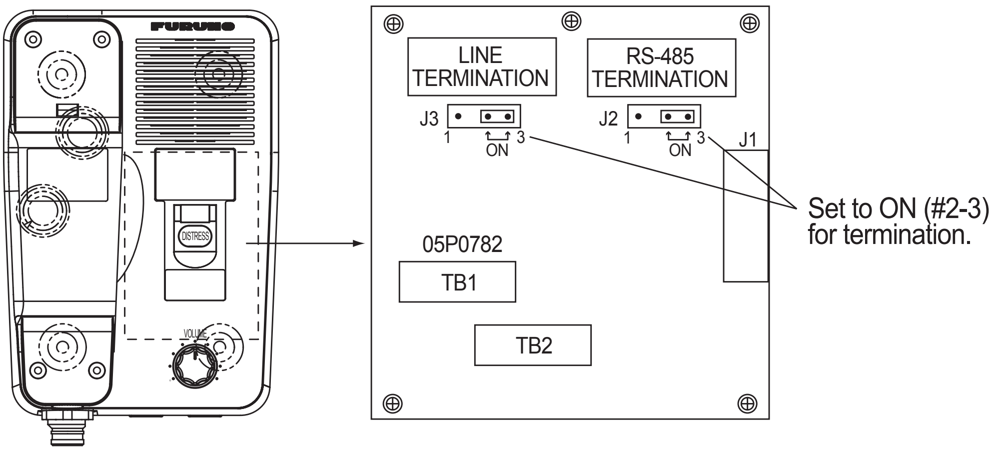
Jumper Setting for Termination

Note: DMC interface is not used for Russian version.

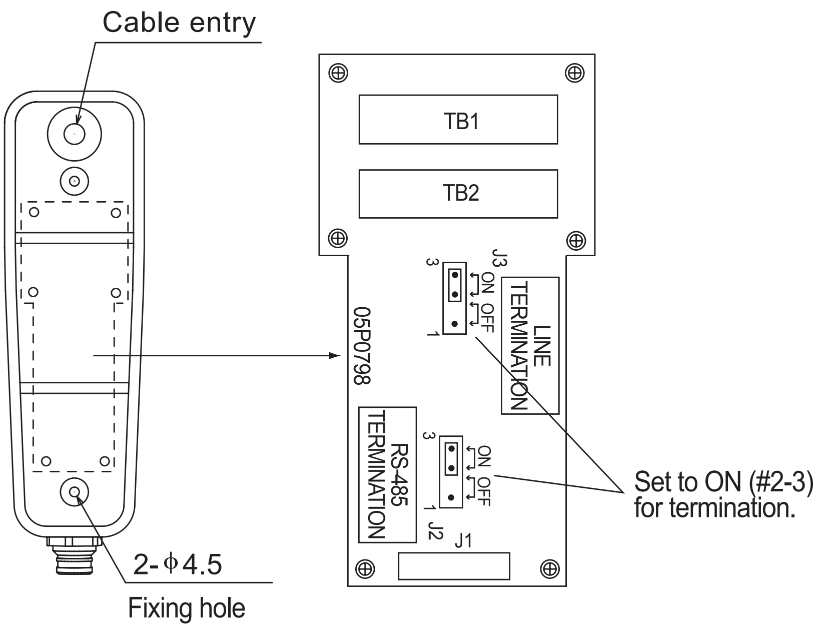
It is necessary, for termination, to change the jumper setting for remote station or DMC interface.
Open the unit(s) terminated and change the jumper plugs J2 and J3 to ON position (#2-#3). (Default setting is OFF position.)



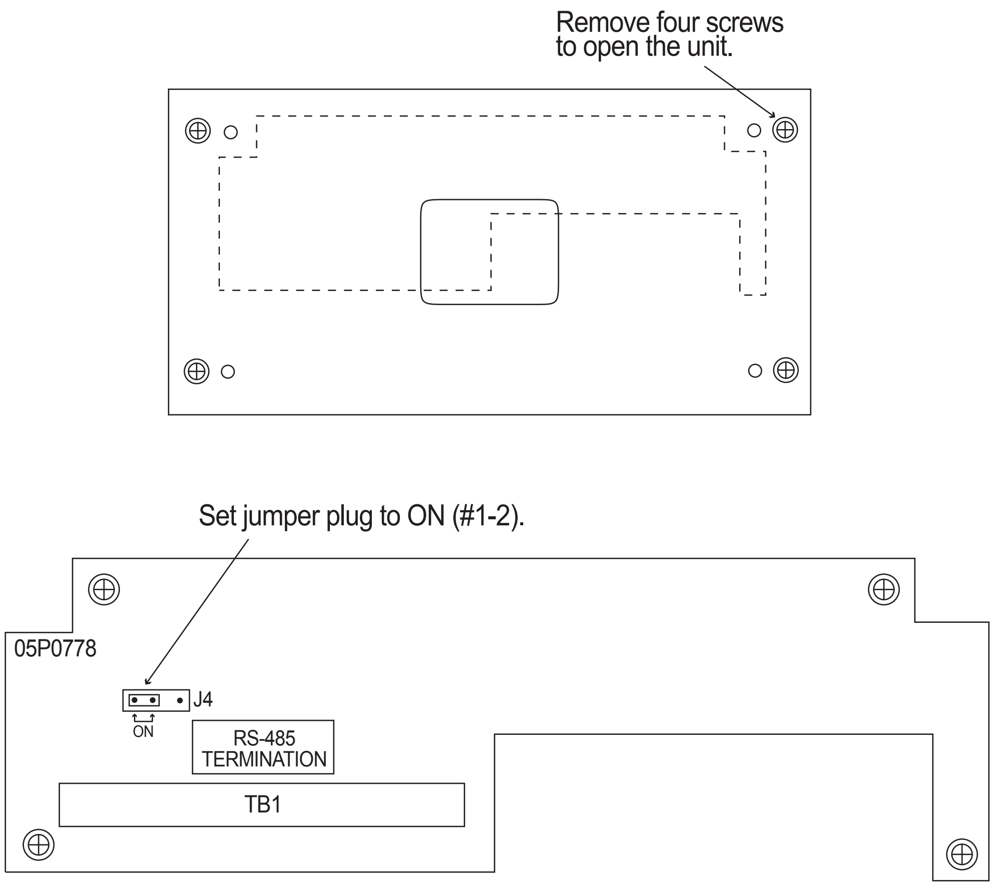
Note that up to four remote stations can be connected.



Remote station RB-8800



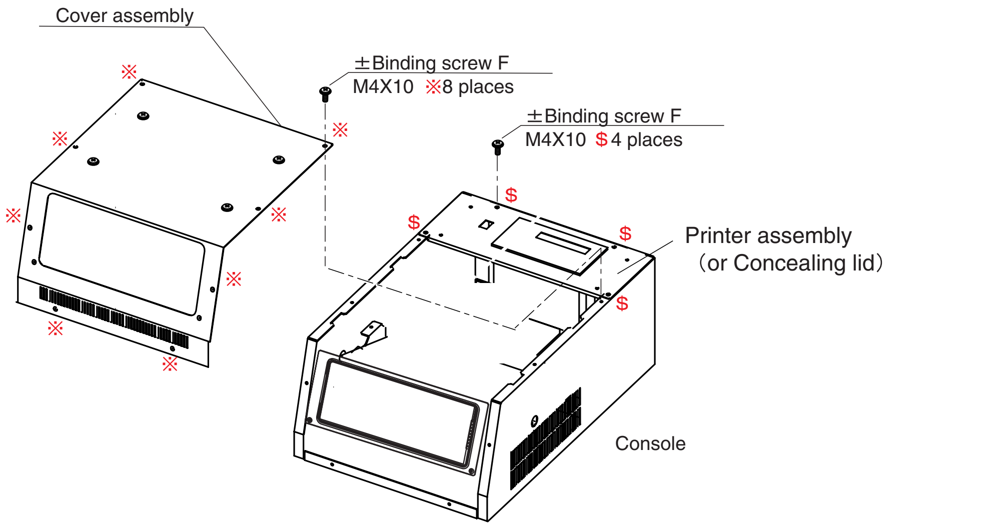
Remote station RB-8810

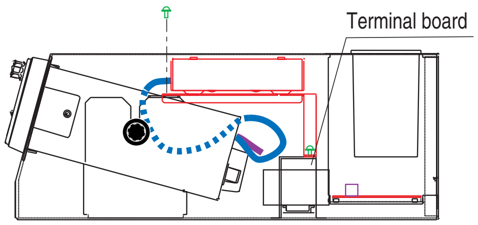


DMC Interface IF-8820

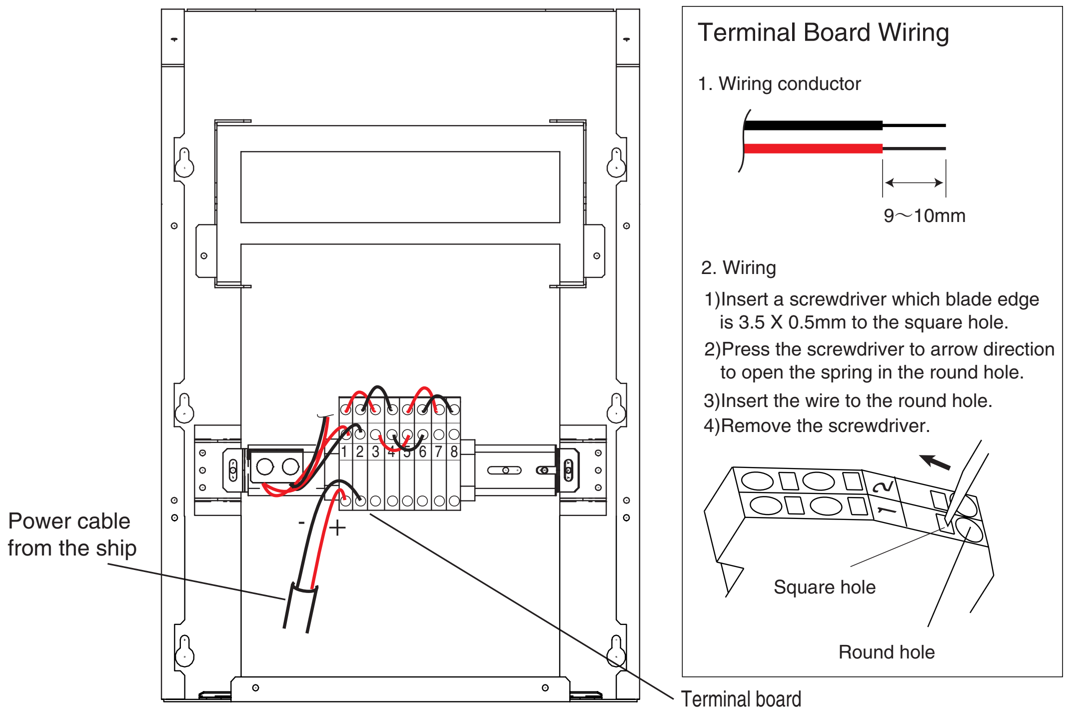
2.10 Wire connection of VHF console

1. Remove the cover assembly and printer assembly (or concealing lid) form the console. For the printer assembly, remove the cables connected at the Transceiver Unit and the terminal board.





2. Connect the power cable from the ship to the terminal block 1 (+) and 2 (-).



3. Connect the ground wire from ship to each ground terminal for the transceiver unit and the junction box.
4. Connect cables from external equipments to the junction box.
5. Fix the printer assembly (or concealing lid) and the cover assembly.

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3. ASSEMBLING CONSOLE KIT

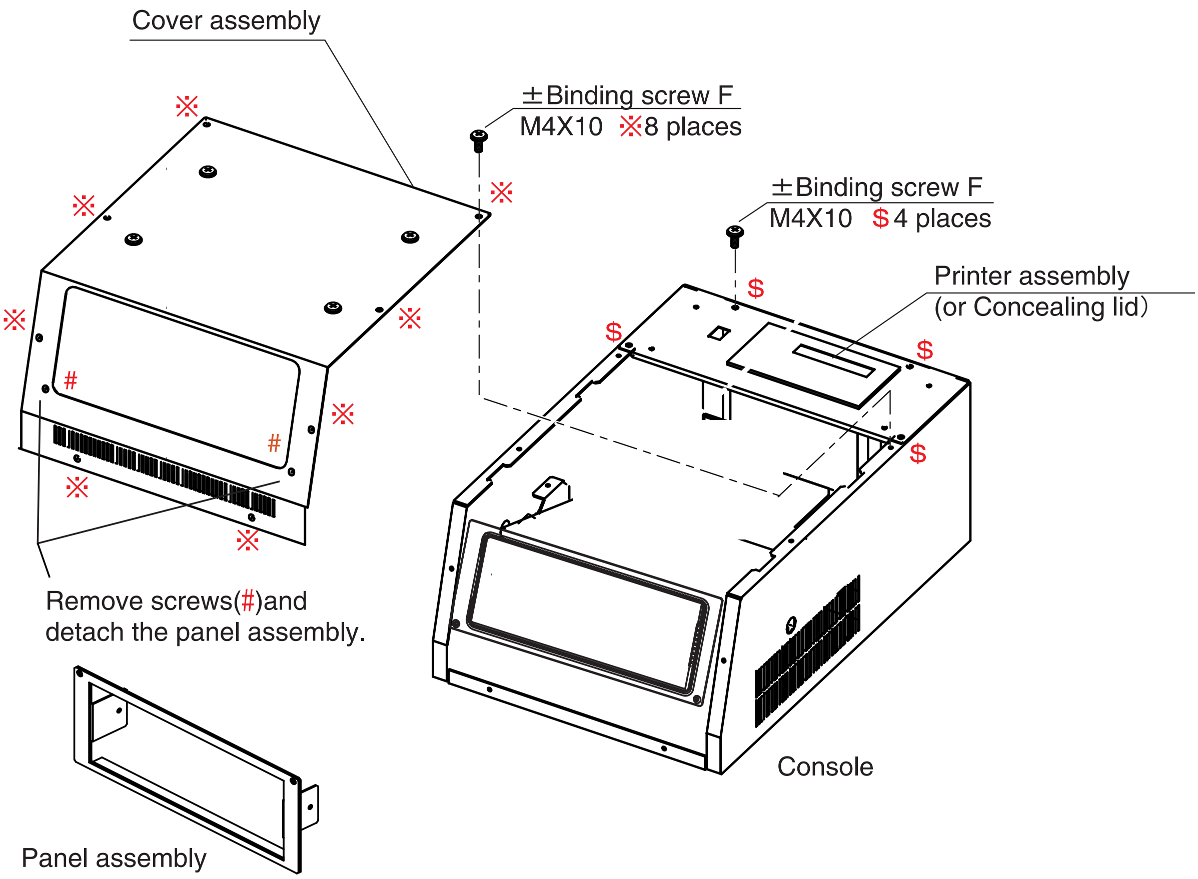
A VHF console kit is required to mount the Transceiver Unit in the field. There are two types as shown below.

VHF console kit

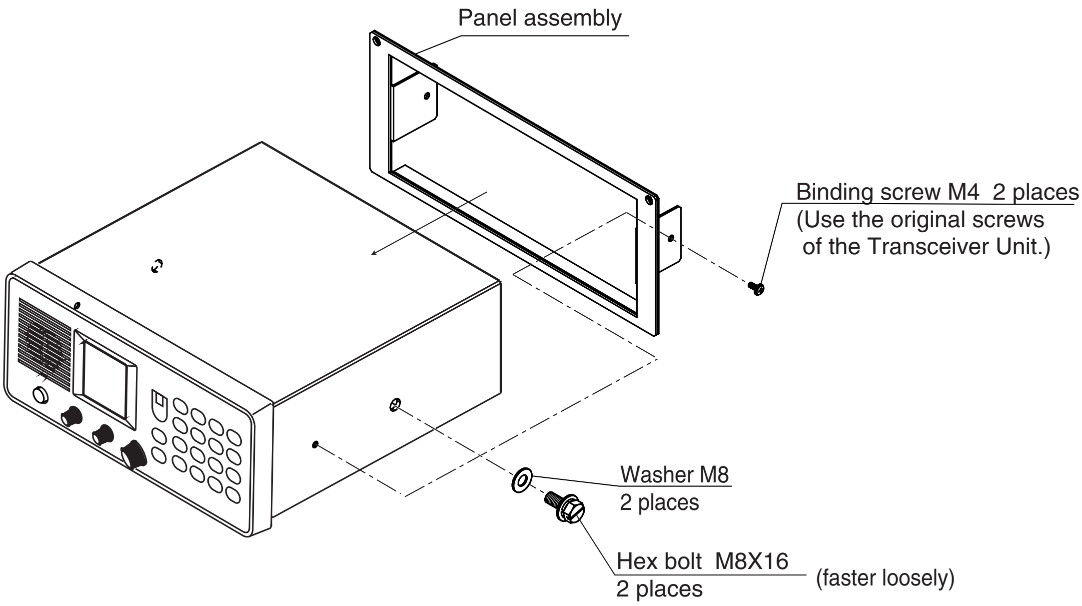
Type	Code No.	Remarks
RC-8800-N-75BG	000-054-125	Without printer
RC-8800-A-75BG	000-054-126	With printer

Assembling the Console Kit

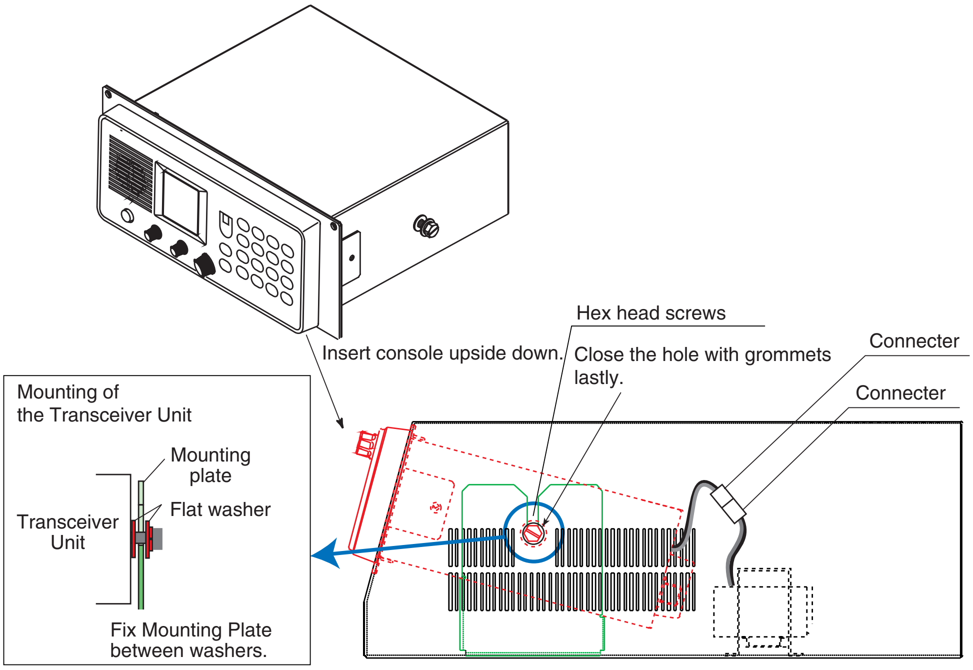
1. Remove the cover assembly, the panel assembly and the printer assembly (or concealing lid) from the console. For the printer assembly, remove the cable connected to the terminal board.



2. Fix the panel assembly to the Transceiver Unit with binding screws (use original binding screws of the Transceiver Unit). Refer to the figure below.
3. Screw in hex bolts M8x16 and flat washers loosely at both sides of the Transceiver Unit.

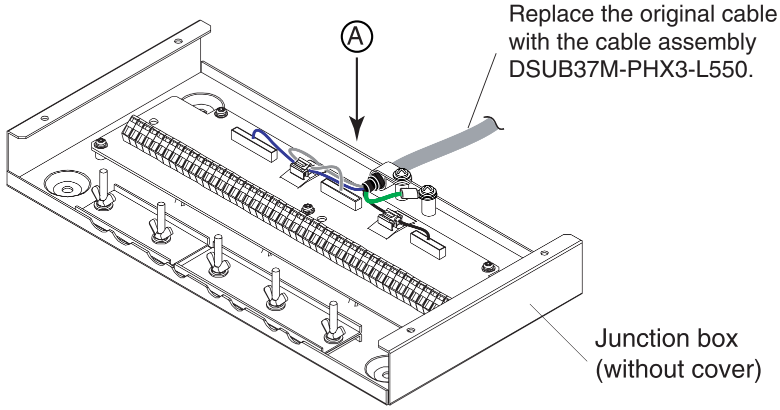


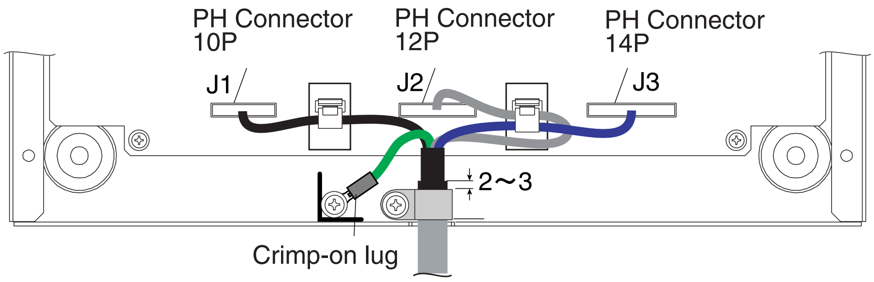
4. Set the Transceiver Unit to the console, remove the grommets from the console and fix the Transceiver Unit with hex bolts using the holes formerly occupied by the grommets.



5. Connect connector from the fuse to the power connector derived from the Transceiver Unit.

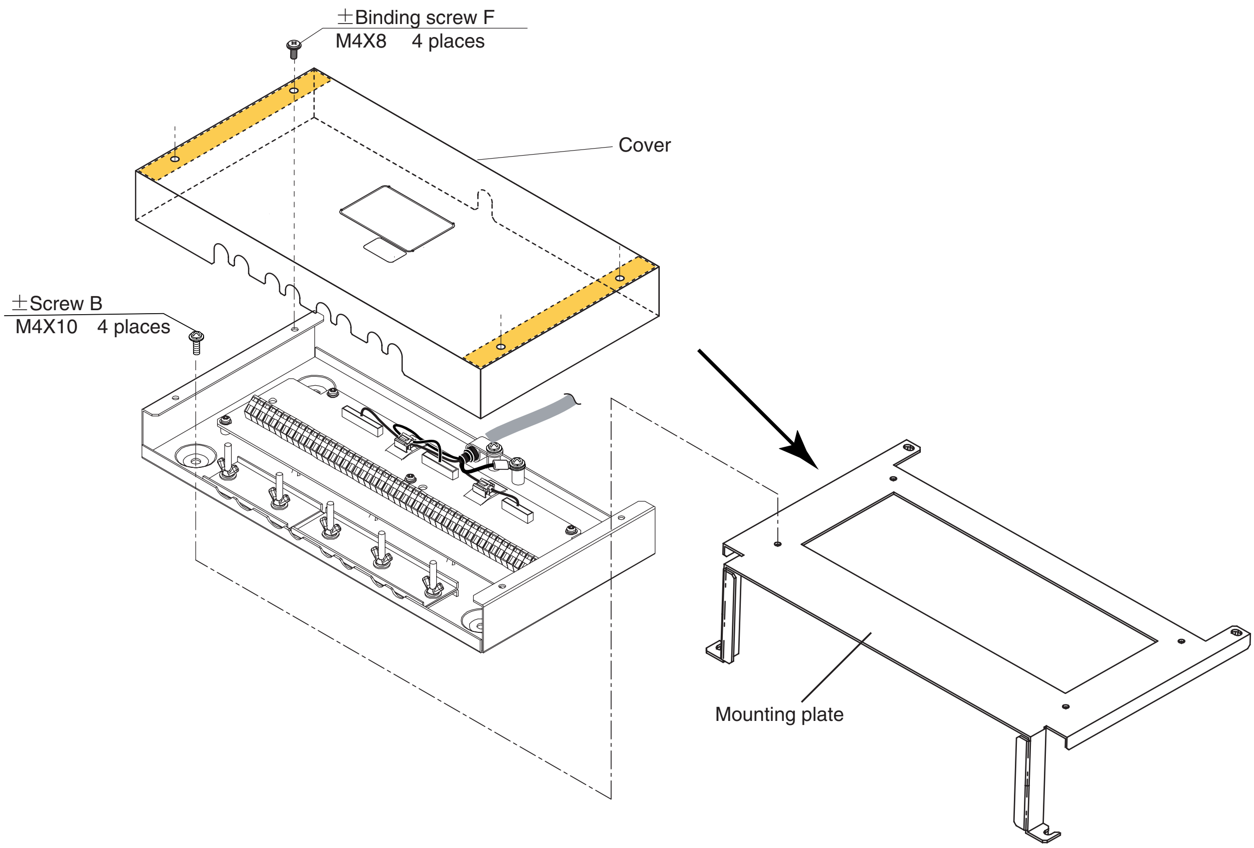
6. Replace the cable attached to junction box with the cable (55 cm, 37-pin D sub) supplied with the console kit.

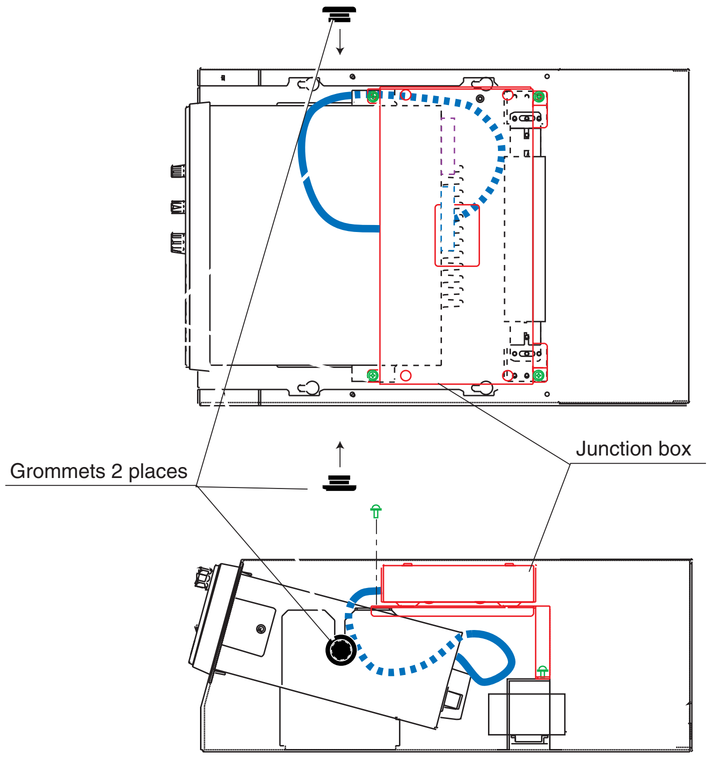




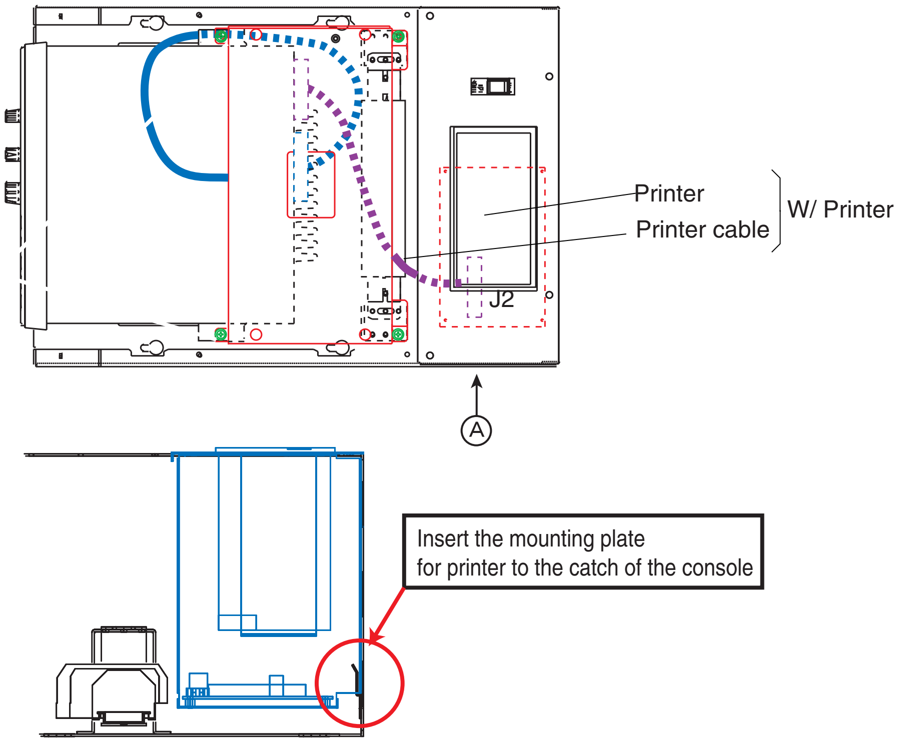
Ⓐ View

7. Connect the cable (37-pin D sub) attached to the junction box to the Transceiver Unit and then mount the junction box on the console.





8. For the console w/printer, connect the printer cable for data transmission to the PRINTER port of the Transceiver Unit and fix the power cable to the terminal board as before. Then, fix the printer assembly to the console. For no printer, fasten the concealing lid to the console.

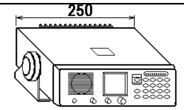
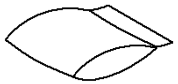
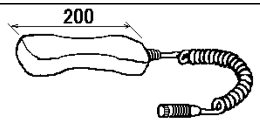
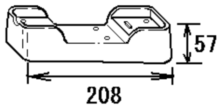
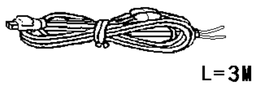
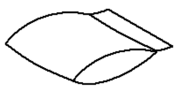


Ⓐ View

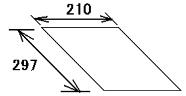
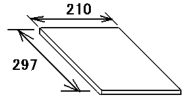
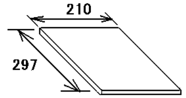
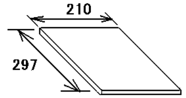
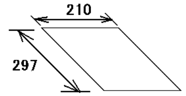
9. Fasten the cover assembly.

NOTE: If the console assembly is to be mounted on the hull, refer to paragraghs 1-9 and 2-10.

PACKING LIST FM-8800S-J/E-N/FM-8800D-J/E-N

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
ユニット UNIT			
送受信機 TRANSCEIVER UNIT		FM-8800S/D 000-054-225 **	1
予備品 SPARE PARTS		SP05-05501	
予備品 SPARE PARTS		SP05-05501 005-377-820	1
付属品 ACCESSORIES		FP05-05700	
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003 000-054-223	1
ﾊﾝﾄﾞｾｯﾄﾊﾝｶﾞｰ組品 BRACKET FOR HANDSET		FP05-05510 005-951-790	1
付属品 ACCESSORIES		FP05-05511 005-951-920	1
工事材料 INSTALLATION MATERIALS		CP05-09900	
ｹｰﾌﾞﾙ組品 CABLE ASSY.		05S9371-0 000-151-711	1
工事材料 INSTALLATION MATERIALS		CP05-09901 005-377-800	1

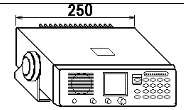
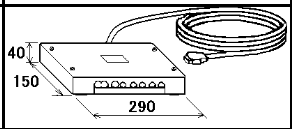
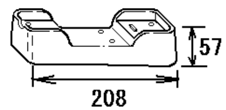
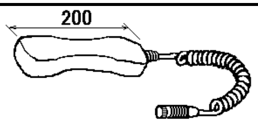
ｺｰﾄﾞ番号末尾の[**]は、選択品の代表型式/ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

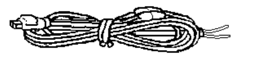
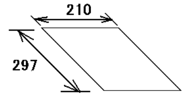
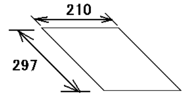
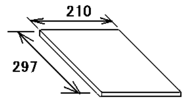
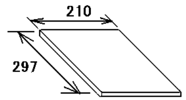
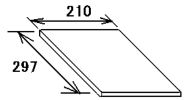
NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
図書 DOCUMENT			
遭難警報ﾌﾛVHFMF* VHF/MF DISTRESS ALERT FLOW		*52-00101-* 000-809-270	1
操作要領書 OPERATOR'S GUIDE		OS*-56420-* 000-149-934 **	1
装備要領書 INSTALLATION MANUAL		IM*-56420-* 000-149-932 **	1
取扱説明書 OPERATOR'S MANUAL		OM*-56420-* 000-149-930 **	1
遭難通信要領書 DISTRESS PROCEDURE		TIC-56420-* 000-149-935	1

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

PACKING LIST

FM-8800S-J/E-A/FM-8800D-J/E-A、FM-8800S-J/E-A-HK/FM-8800D-J/E-A-HK

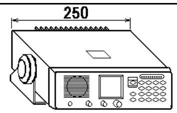
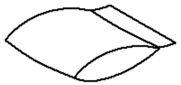
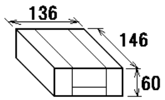
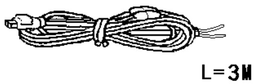
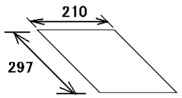
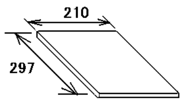
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ユニット UNIT			
送受信機 TRANSCEIVER UNIT		FM-8800S*/D* 000-054-166 **	1
ｾﾂｿﾞｸﾊﾞｺ JUNCTION BOX		IF-8810 000-054-219	1
予備品 SPARE PARTS			
予備品 SPARE PARTS		SP05-05501 005-377-820	1
付属品 ACCESSORIES		FP05-05700	
付属品 ACCESSORIES		FP05-05511 005-951-920	1
ﾊﾝﾄﾞｾｯﾄﾊﾝｶﾞｰ組品 BRACKET FOR HANDSET		FP05-05510 005-951-790	1
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003 000-054-223	1
工事材料 INSTALLATION MATERIALS		CP05-09900	
工事材料 INSTALLATION MATERIALS		CP05-09901 005-377-800	1

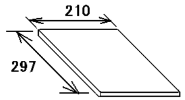
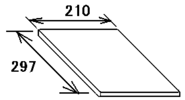
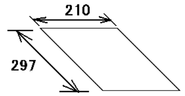
NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
ｹｰﾌﾞﾙ組品 CABLE ASSY.	 L=3M	05S9371-0 000-151-711	1
工事材料 INSTALLATION MATERIALS		CP05-08701	
工事材料 INSTALLATION MATERIALS		CP05-08701 005-949-280	1
図書 DOCUMENT			
遭難警報ﾌﾛVHFMF* VHF/MF DISTRESS ALERT FLOW		*52-00101-* 000-809-270	1
遭難通信要領書 DISTRESS PROCEDURE		TIC-56420-* 000-149-935 **	1
操作要領書 OPERATOR'S GUIDE		OS*-56420-* 000-149-934 **	1
取扱説明書 OPERATOR'S MANUAL		OM*-56420-* 000-149-930 **	1
装備要領書 INSTALLATION MANUAL		IM*-56420-* 000-149-932 **	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

PACKING LIST FM-8800S-F-N/FM-8800D-F-N

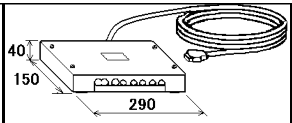
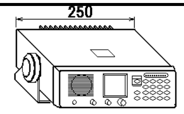
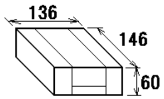
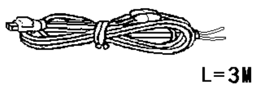
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ユニット UNIT			
送受信機 TRANSCEIVER UNIT		FM-8800S/D 000-054-225 **	1
予備品 SPARE PARTS			
予備品 SPARE PARTS		SP05-05501 005-377-820	1
付属品 ACCESSORIES		FP05-05710	
ﾏｲｸﾛﾌｫﾝ箱詰品 MICROPHONE		DM-2003-F 005-377-760	1
工事材料 INSTALLATION MATERIALS		CP05-09900	
ｹｰﾌﾞﾙ組品 CABLE ASSY.		05S9371-0 000-151-711	1
工事材料 INSTALLATION MATERIALS		CP05-09901 005-377-800	1
図書 DOCUMENT			
遭難警報ﾌﾛVHFMF* VHF/MF DISTRESS ALERT FLOW		*52-00101-* 000-809-270	1
装備要領書 INSTALLATION MANUAL		IM*-56420-* 000-149-932	1

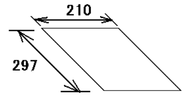
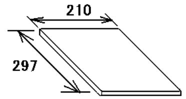
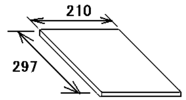
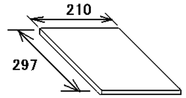
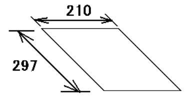
NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
取扱説明書 OPERATOR'S MANUAL		OM*-56420-* 000-149-930	1
操作要領書 OPERATOR'S GUIDE		OS*-56420-* 000-149-934	1
遭難通信要領書 DISTRESS PROCEDURE		TIC-56420-* 000-149-935	1

CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

PACKING LIST

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
ユニット UNIT			
ｾﾂｿﾞｸﾊﾞｺ JUNCTION BOX		IF-8810 000-054-219	1
送受信機 TRANSCEIVER UNIT		FM-8800S/D 000-054-225 **	1
予備品 SPARE PARTS			
予備品 SPARE PARTS		SP05-05501 005-377-820	1
付属品 ACCESSORIES		FP05-05710	
ﾏｲｸﾛﾌｫﾝ箱詰品 MICROPHONE		DM-2003-F 005-377-760	1
工事材料 INSTALLATION MATERIALS		CP05-09900	
ｹｰﾌﾞﾙ組品 CABLE ASSY.		05S9371-0 000-151-711	1
工事材料 INSTALLATION MATERIALS		CP05-09901 005-377-800	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-08701 005-949-280	1

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
図書 DOCUMENT			
遭難警報ﾌﾛVHFMF* VHF/MF DISTRESS ALERT FLOW		*52-00101-* 000-809-270	1
装備要領書 INSTALLATION MANUAL		IM*-56420-* 000-149-932	1
取扱説明書 OPERATOR'S MANUAL		OM*-56420-* 000-149-930	1
操作要領書 OPERATOR'S GUIDE		OS*-56420-* 000-149-934	1
遭難通信要領書 DISTRESS PROCEDURE		TIC-56420-* 000-149-935	1

CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

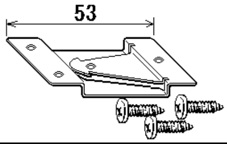
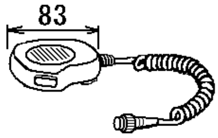
(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

05EC-X-9859

PACKING LIST

05EC-X-9857 -1 1/1

DM-2003-F

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
マイクセット MICROPHONE SET			
フック HOOK		ZIRXXCDM002 000-150-017	1
マイクロフォン MICROPHONE		KON-003 000-150-016	1

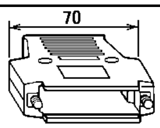
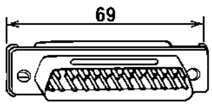
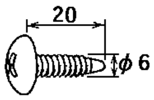
(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

FURUNO

CODE NO.	005-377-800	05EC-X-9401 -2
TYPE	CP05-09901	1/1

工事材料表

INSTALLATION MATERIALS

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ﾐﾆﾋﾟﾝ組品(1) CABLE ASSY.		L-420 CODE NO. 000-151-748	1	Used only Japan
2	ｺﾈｸﾀﾌｰﾄﾞ(XM2) HOUSING CASE		XM2S-3712 CODE NO. 000-145-423	1	
3	ｺﾈｸﾀ(XM2) CONNECTOR		XM2A-3701 CODE NO. 000-145-424	1	
4	+ﾄﾗｽﾀｯﾋﾟﾝﾈｼﾞ 1種 SELF-TAPPING SCREW		6X20 SUS304 CODE NO. 000-802-084	5	

FURUNO ELECTRIC CO., LTD.

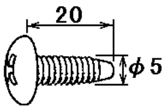
(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

FURUNO

CODE NO.	005-949-280	05DY-X-9417 -0
TYPE	CP05-08701	1/1

工事材料表

INSTALLATION MATERIALS

番 号 NO.	名 称 NAME	略 図 OUTLINE	型名／規格 DESCRIPTIONS		数量 Q'TY	用途／備考 REMARKS
1	+ﾄﾗｽﾀｯﾋﾟﾝﾈｼﾞ 1種 SELF-TAPPING SCREW		5X20 SUS304		4	
			CODE NO.	000-802-081		

05DY-X-9417

FURUNO ELECTRIC CO .,LTD.

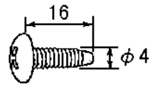
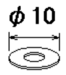
(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

FURUNO

CODE NO.	005-951-920	05DZ-X-9502 -0
TYPE	FP05-05511	1/1

付属品表

ACCESSORIES

番 号 NO.	名 称 NAME	略 図 OUTLINE	型名／規格 DESCRIPTIONS		数量 Q'TY	用途／備考 REMARKS
1	+トラスタッピンネジ SELF-TAPPING SCREW		4X16 SUS304 1シュ		2	
			CODE NO.	000-802-080		
2	ポリカワッシャー WASHER		M4		2	
			CODE NO.	000-864-937		

05DZ-X-9502

FURUNO ELECTRIC CO ., LTD.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

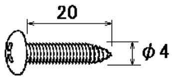
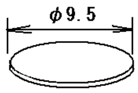
FURUNO

CODE NO.	005-959-720	05EC-X-9502 -2
TYPE	FP05-05701	1/1

付属品表

ACCESSORIES

RB-8800

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ﾎﾟﾘｶﾜｯｼｬｰ WASHER		M4 CODE NO. 000-864-937	4	
2	+ﾄﾗｽﾀｯﾋﾟﾝﾈｼﾞ SELF-TAPPING SCREW		4X20 SUS304 CODE NO. 000-805-687	4	
3	ﾌﾞﾗｲﾝﾄﾞｼｰﾙ SEAL		05-086-1102-2 CODE NO. 100-281-282	4	

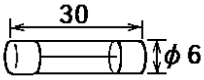
FURUNO ELECTRIC CO ., LTD.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

FURUNO

CODE NO.	005-377-820	05EC-X-9301 -0 1/1
TYPE	SP05-05501	BOX NO. P

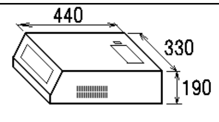
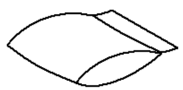
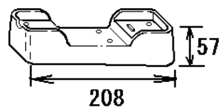
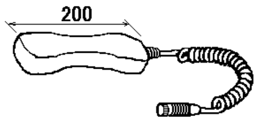
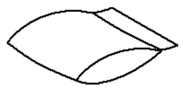
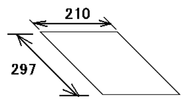
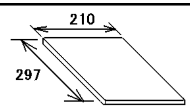
SHIP NO.	SPARE PARTS LIST FOR	U S E	SETS PER VESSEL

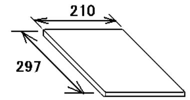
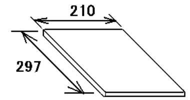
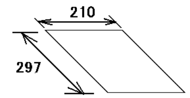
ITEM NO.	NAME OF PART	OUTLINE	DWG. NO. OR TYPE NO.	QUANTITY WORKING PER SET	QUANTITY WORKING PER VES	QUANTITY SPARE	REMARKS/CODE NO.
1	ﾋｭｰｽﾞ FUSE		FGBO 15A AC125V			2	000-549-014

MFR'S NAME	FURUNO ELECTRIC CO.,LTD.	DWG NO.	05EC-X-9301	1/1

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

P A C K I N G   L I S T   RC-8800S/D-N-75BG、RC-8800S/D-A-75BG

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
ユニット UNIT			
VHFｺﾝｿｰﾙ VHF CONSOLE		RC-8800S/D-N-75BG,RC-8800S/D-A-75BG 000-054-240 **	1
予備品 SPARE PARTS			
予備品 SPARE PARTS		SP05-05501 005-377-820	1
付属品 ACCESSORIES		**FP05-05800**	
ﾊﾝﾄﾞｾｯﾄﾊﾝｶﾞｰ組品 BRACKET FOR HANDSET		FP05-05510 005-951-790	1
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003 000-054-223	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-10201 005-371-850	1
図書 DOCUMENT			
遭難警報ﾌﾛVHFMF* VHF/MF DISTRESS ALERT FLOW		*52-00101-* 000-809-270 **	1
装備要領書 INSTALLATION MANUAL		IM*-56420-* 000-149-932 **	1

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
取扱説明書 OPERATOR'S MANUAL		OM*-56420-* 000-149-930 **	1
操作要領書 OPERATOR'S GUIDE		OS*-56420-* 000-149-934 **	1
遭難通信要領書 DISTRESS PROCEDURE		TIC-56420-* 000-149-935	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

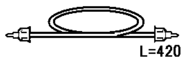
（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

FURUNO

CODE NO.	005-371-850	05EC-X-9409 -0
TYPE	CP05-10201	1/1

工事材料表

INSTALLATION MATERIALS

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ﾐﾆﾋﾟﾝ組品(1) CABLE ASSY.		L-420 CODE NO. 000-151-748	1	Used only Japan

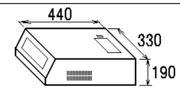
05EC-X-9409

FURUNO ELECTRIC CO ., LTD.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

PACKING LIST

RC-8800-N/RC-8800-A

NAME	OUTLINE	DESCRIPTION/CODE №	Q'TY
ユニット UNIT			
ｺﾝｿｰﾙ組品 CONSOLE KIT		RC-8800-N 005-371-650 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-10001 005-371-670	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

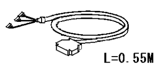
05EC-X-9860

FURUNO

CODE NO.	005-371-670	05EC-X-9408 -1
TYPE	CP05-10001	1/1

工事材料表

INSTALLATION MATERIALS

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS		数量 Q'TY	用途／備考 REMARKS
1	ｹｰﾌﾞﾙ組品 CABLE ASSY.		DSUB37M-PHX3-L550		1	
			CODE NO.	000-153-297		
2	ﾐﾆﾋﾟﾝ組品(1) CABLE ASSY.		L-420		1	
			CODE NO.	000-151-748		

05EC-X-9408

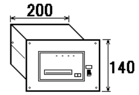
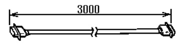
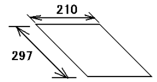
FURUNO ELECTRIC CO ., LTD.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

PACKING LIST

05EC-X-9862 -2　1/1

PP-8800

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット　UNIT			
ﾌﾟﾘﾝﾀ PRINTER UNIT		PP-8800 000-054-127-00	1
工事材料　INSTALLATION MATERIALS		CP05-10100	
ｹｰﾌﾞﾙ組品 CABLE ASSY.		17JE-23250-02 000-138-539-00	1
電源ｹｰﾌﾞﾙＤＣ用 POWER CABLE (FOR DC MAINS)		VCTF0.75X2C *3M* 000-112-543-00	1
図書　DOCUMENT			
外寸図（和英） OUTLINE DRAWING (JP/EN)		C5642-G15-* 000-151-762-00	1

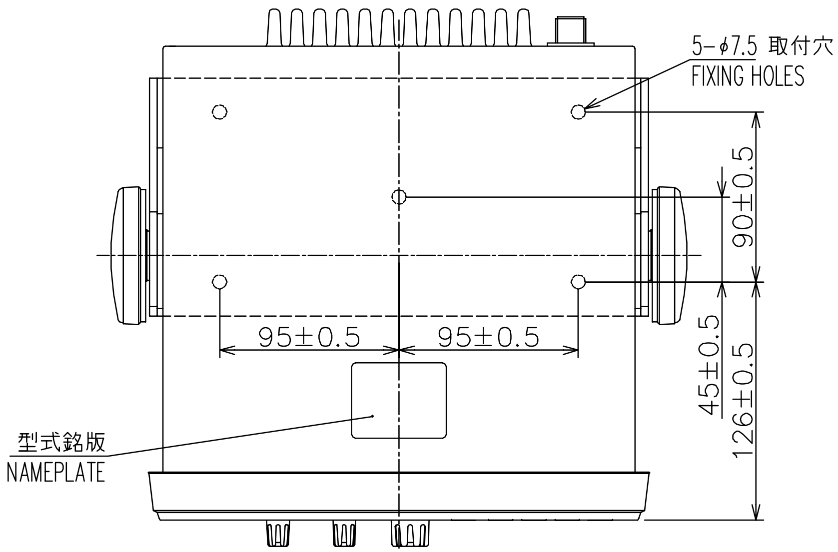
型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

05EC-X-9862

FURUNO



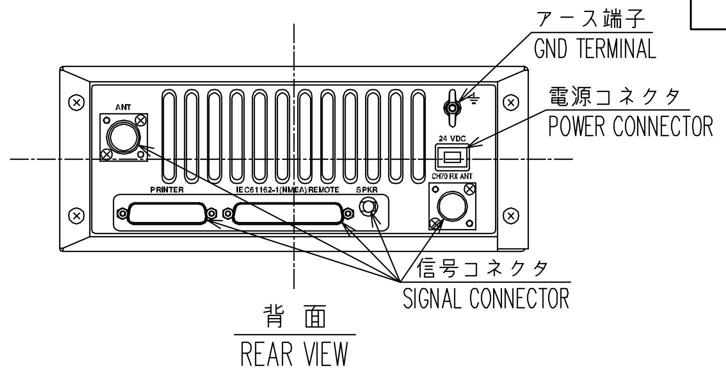
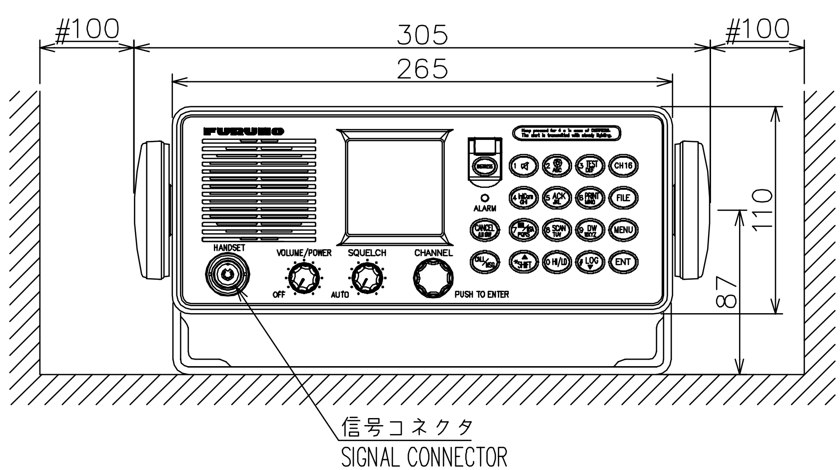


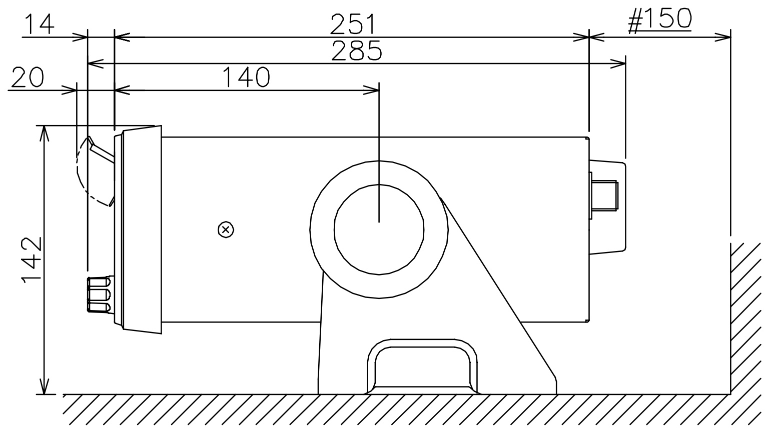
表１ TABLE 1

寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TORELANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３

表２ TABLE 2

機種名 MODEL	質量(kg±10%) MASS
ＦＭ－８８００Ｓ	5.5
ＦＭ－８８００Ｄ	6.4





注 記 １） ＃印寸法は最小サービス空間寸法とする。

２） 指定外の寸法公差は表１による。

３） 取付用ネジは＋トラスタッピンネジ６ｘ２０を使用のこと。

NOTE

1. #: MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE SELF-TAPPING SCREWS 6x20 FOR FIXING THE UNIT.

DRAWN	Sep. 22, '04 E. MIYOSHI	TITLE	FM-8800S/D
CHECKED	T. TAKAHASHI	名称	送受信機（卓上装備）
APPROVED	Y. Hatai	FM-8800S/D	外寸図
SCALE 1/4	MASS 表２参照 TABLE 2	NAME	TRANSCEIVER UNIT (TABLETOP MOUNT)
DWG.No. C5642-G01- A	05-093-100G-4		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

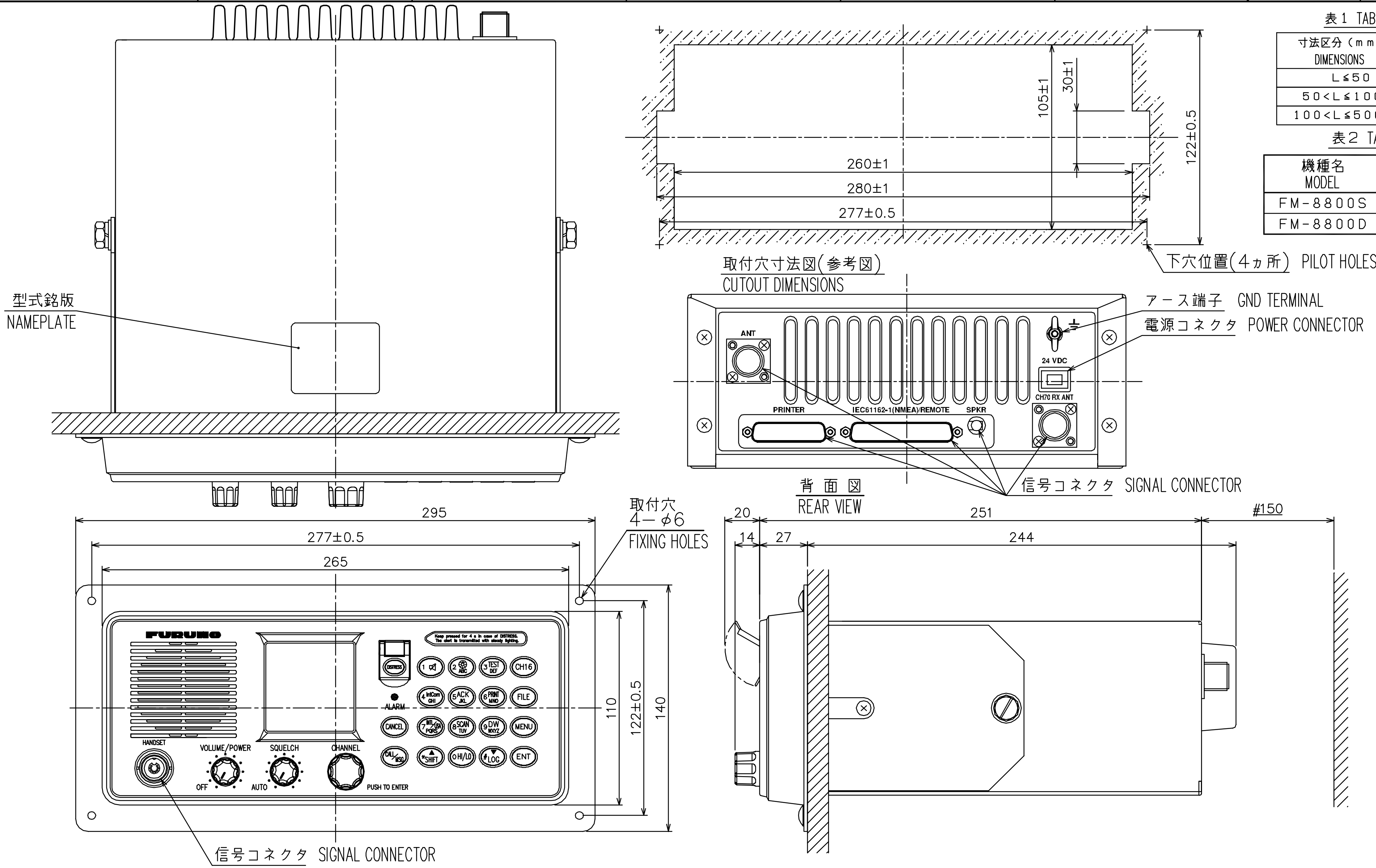


表1 TABLE 1

寸法区分(mm) DIMENSIONS	公差(mm) TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

表2 TABLE 2

機種名 MODEL	質量(kg±10%) MASS
FM-8800S	5.5
FM-8800D	6.4

注 記
1) #印寸法は最小サービス空間寸法とする。
2) 指定外の寸法公差は表1による。
3) 取付用ネジは+トラスタッピンネジ5x20を使用のこと。

NOTE
1) #: MINIMUM SERVICE CLEARANCE.
2) TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3) USE SELF-TAPPING SCREWS 5x20 FOR FIXING THE UNIT.

DRAWN	Sep. 22, '04 E. MIYOSHI	TITLE	FM-8800S/D
CHECKED	TAKAHASHI. T	名称	送受信機(埋込装備F)
APPROVED	Y. Hatai	FM-8800S/D	外寸図
SCALE	1/3 MASS 表2参照 TABLE 2	NAME	TRANSCEIVER UNIT (FLUSH MOUNT F)
DWG.No.	C5642-G06- A	05-093-120G-4	OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

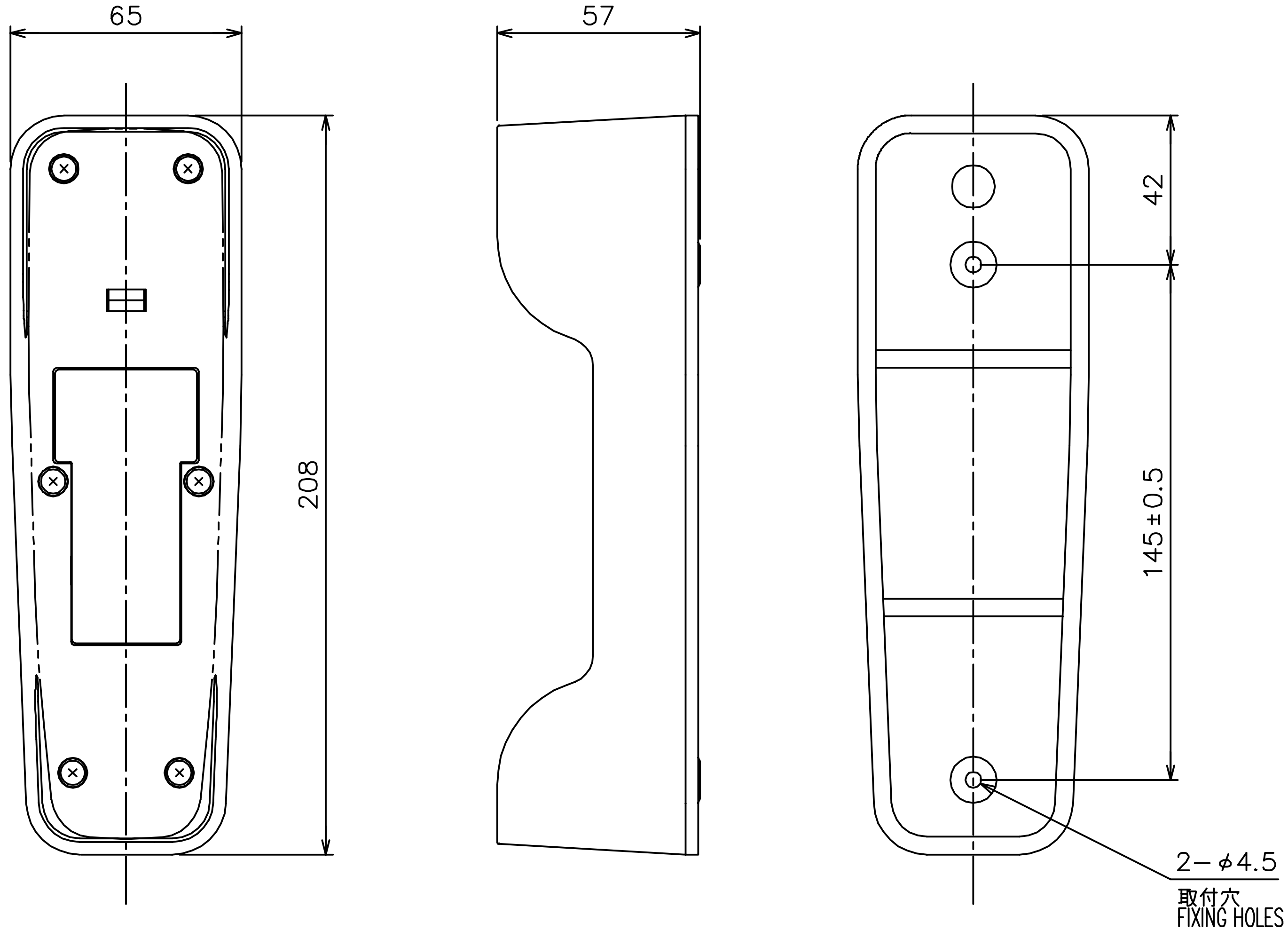


表 1 TABLE 1

寸法区分（mm） DIMENSIONS	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

注 記 1） 指定外の寸法公差は表1による。
2） 取付用ネジは＋トラスタッピンネジ4x16を使用のこと。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. USE SELF-TAPPING SCREWS 4x16 FOR FIXING THE UNIT.

DRAWN Dec. 10, '04 E. MIYOSHI		TITLE	FP05-05510
CHECKED TAKAHASHI. T		名称	ハンドセットハンガー
APPROVED Y. Hatai	FM-8800S/D FS-1570		外寸図
SCALE 1/2	MASS 0.30 ±10% kg	NAME	HANDSET HANGER
DWG.No. C5636-G08- B	05-089-401G-2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

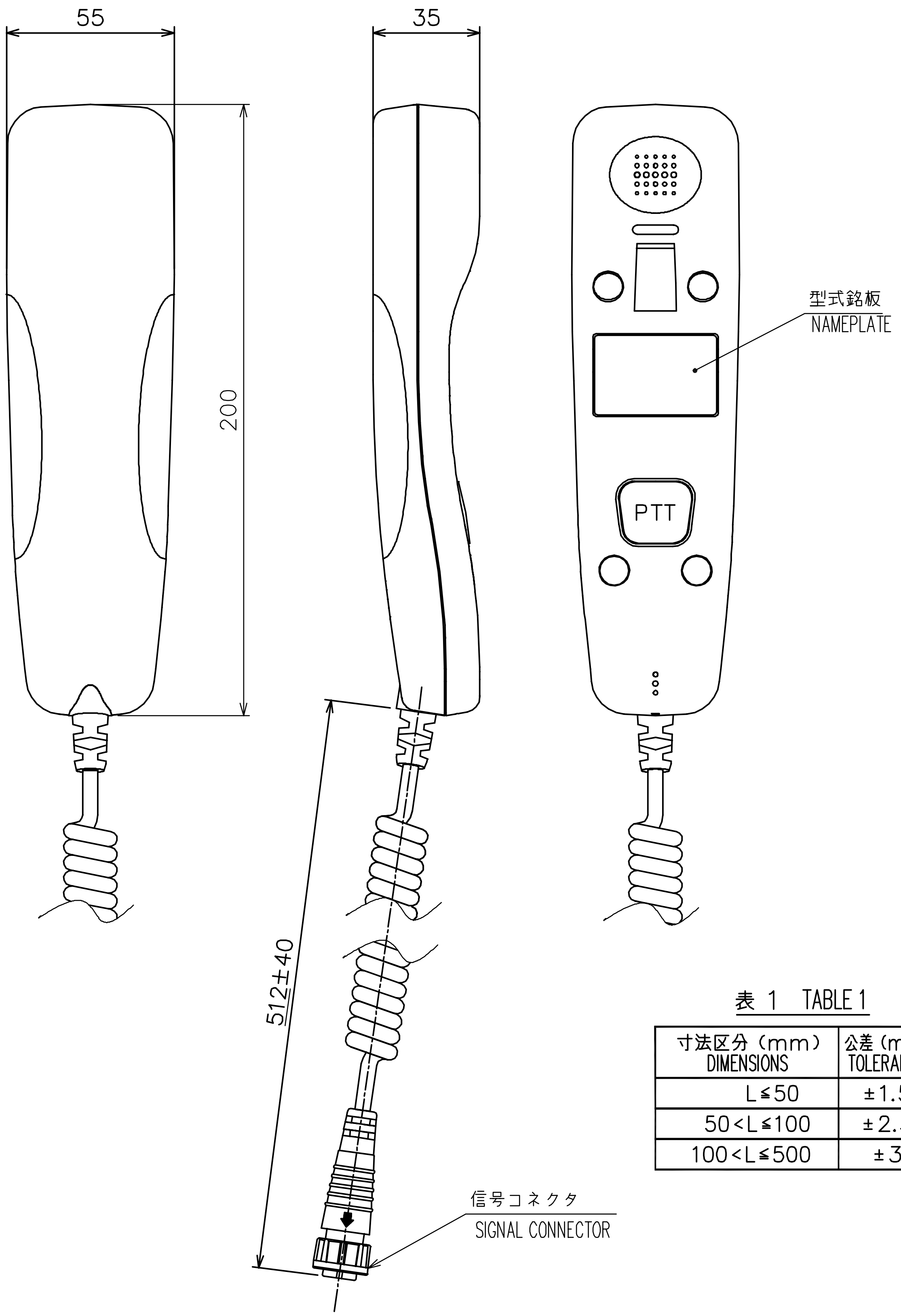


表 1　TABLE 1

寸法区分（mm）DIMENSIONS	公差（mm）TOLERANCE
L≦50	±1.5
50＜L≦100	±2.5
100＜L≦500	±3

注　記　　指定外の寸法公差は表１による。

NOTE　　TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

DRAWN Dec. 10 '04 E. MIYOSHI		TITLE	HS-2003
CHECKED TAKAHASHI. T	FM-8800S/D	名称	ハンドセット
APPROVED Y. Hatai	質量にはカールコードを含む。 MASS W/ CABLE.		外寸図
SCALE 1/2	MASS 0.20 ±10% kg	NAME	HANDSET
DWG.No. C5642-G10-C	05-093-200G-2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

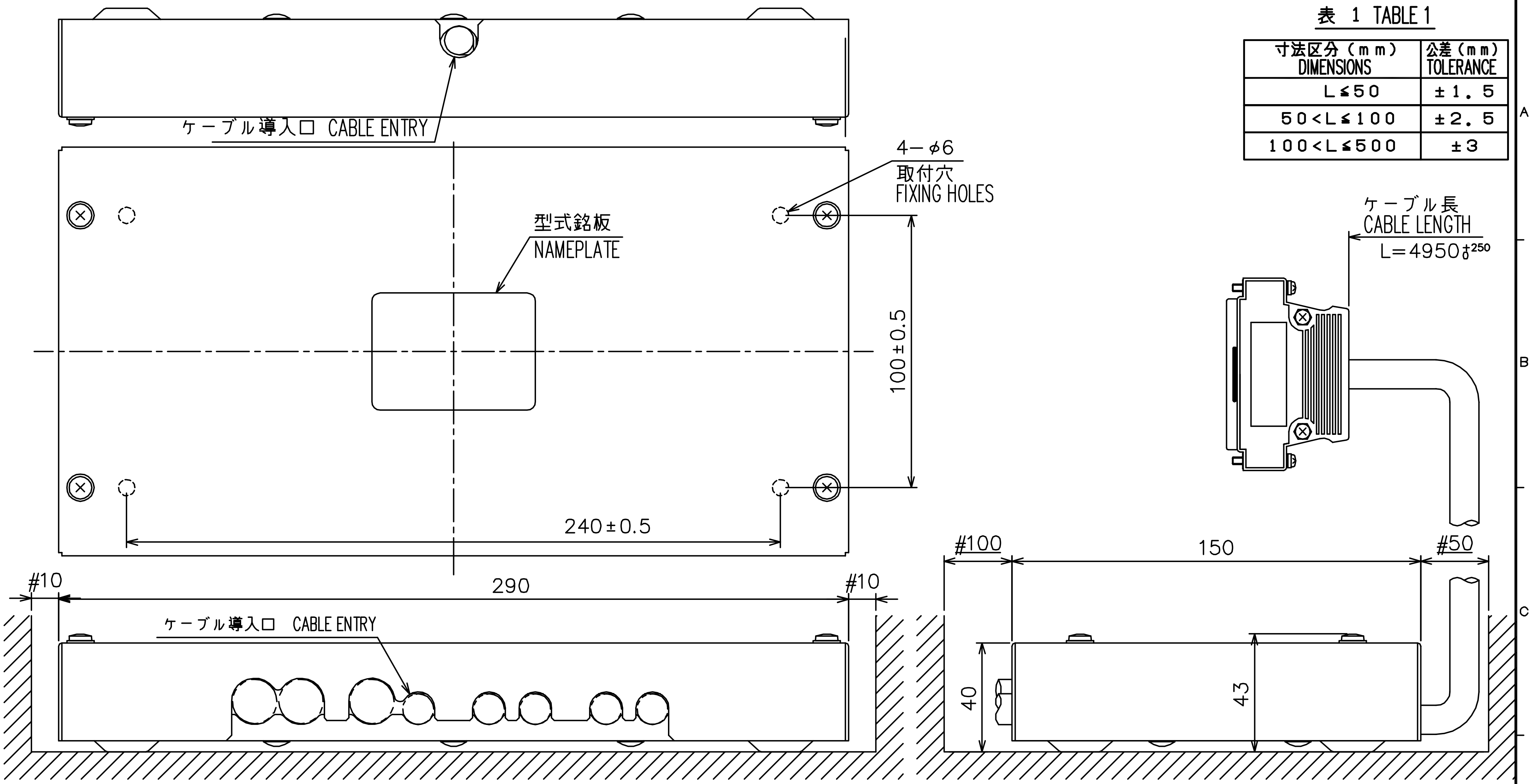


表 1 TABLE 1

寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３

注 記 １） ＃印寸法は最小サービス空間寸法とする。
２） 指定外の寸法公差は表１による。
３） 取付用ネジは＋トラスタッピンネジ呼び径５ｘ２０を使用のこと。

NOTE
1. #: MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE SELF-TAPPING SCREWS 5x20 FOR FIXING THE UNIT.

DRAWN	Sep. 3, '04 E.MIYOSHI		TITLE	IF-8810
CHECKED	TAKAHASHI. T		名称	接続箱
APPROVED	Y. Hatai	FM-8800S/D		外寸図
SCALE 1/2	MASS 2.5 ±10% kg		NAME	JUNCTION BOX
DWG.No.	C5642-G03- C	05-093-400G-1		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

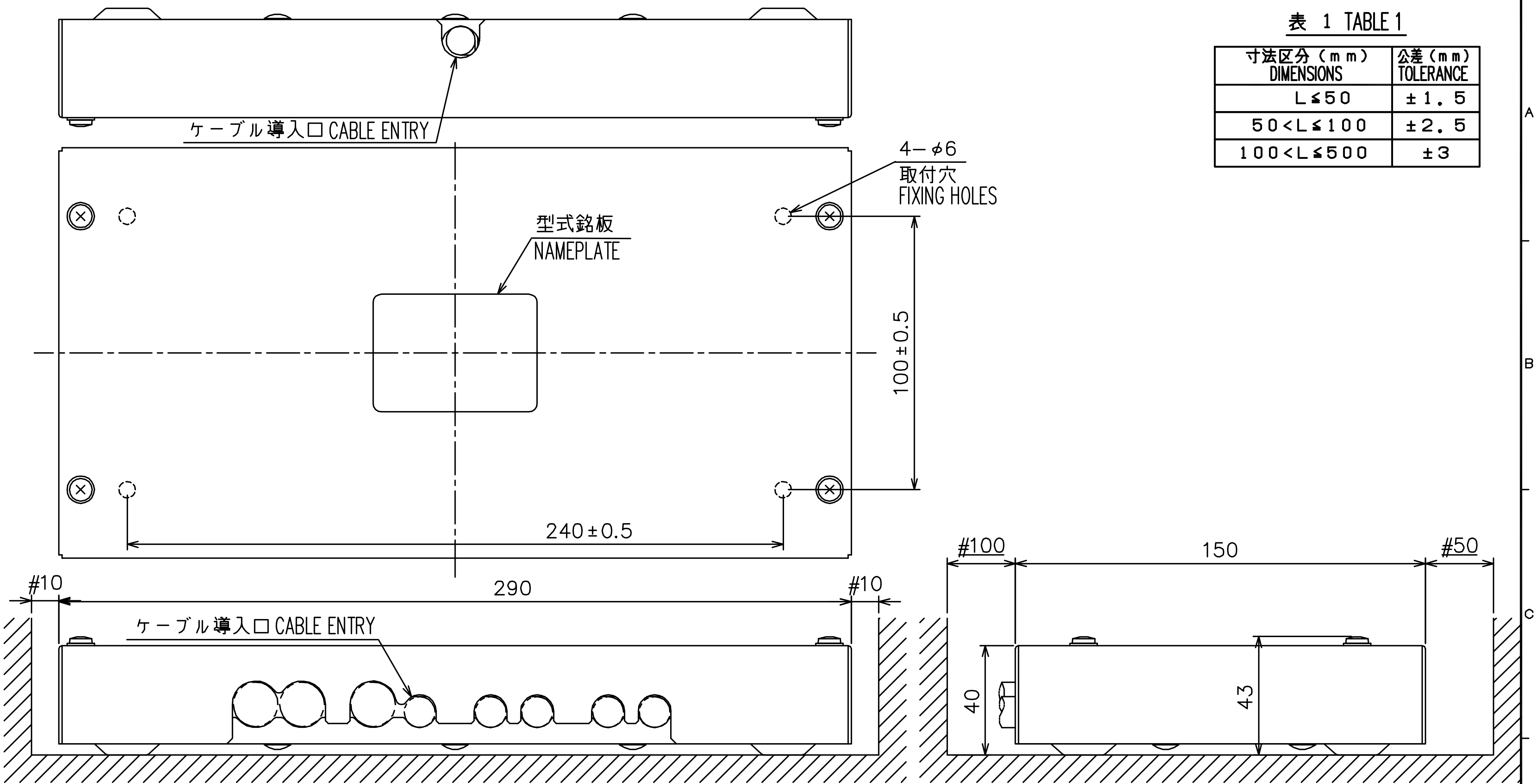


表 1 TABLE 1

寸法区分（ｍｍ）DIMENSIONS	公差（ｍｍ）TOLERANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３

注　記 １）＃印寸法は最小サービス空間寸法とする。
２）指定外の寸法公差は表１による。
３）取付用ネジは＋トラスタッピンネジ呼び径５ｘ２０を使用のこと。

NOTE
1. #: MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE SELF-TAPPING SCREWS 5x20 FOR FIXING THE UNIT.

DRAWN	Sep. 22, '04 E.MIYOSHI	TITLE	IF-8820
CHECKED	TAKAHASHI. T	名称	DMCインターフェイス
APPROVED	Y. Hatai / FM-8800S/D		外寸図
SCALE	1/2 MASS 1.5 ±10% kg	NAME	DMC INTERFACE UNIT
DWG.No.	C5642-G04- C / 05-093-500G-2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

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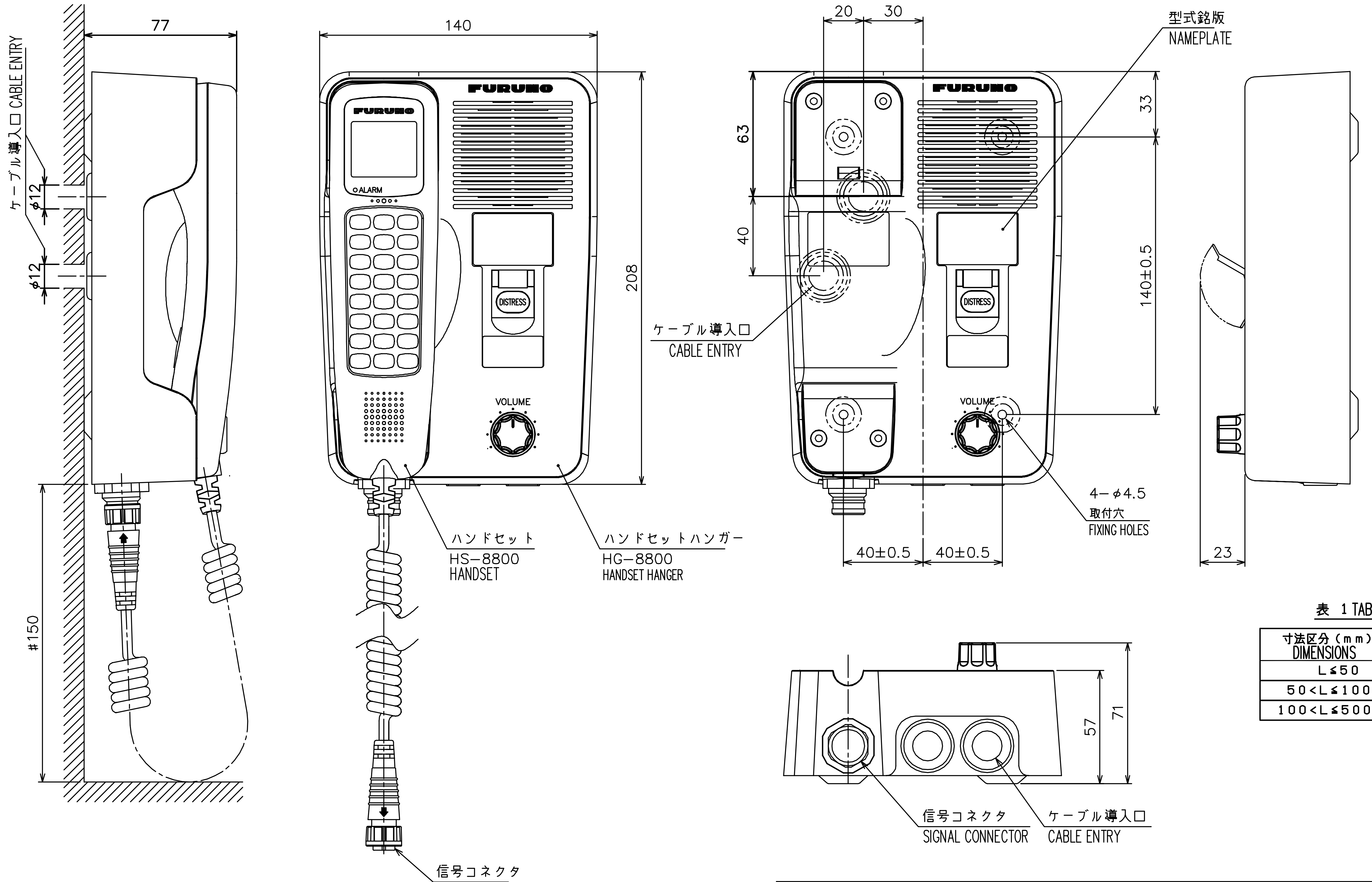


表 1 TABLE 1

寸法区分（mm） DIMENSIONS	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

注　記　1）指定外の寸法公差は表1による。

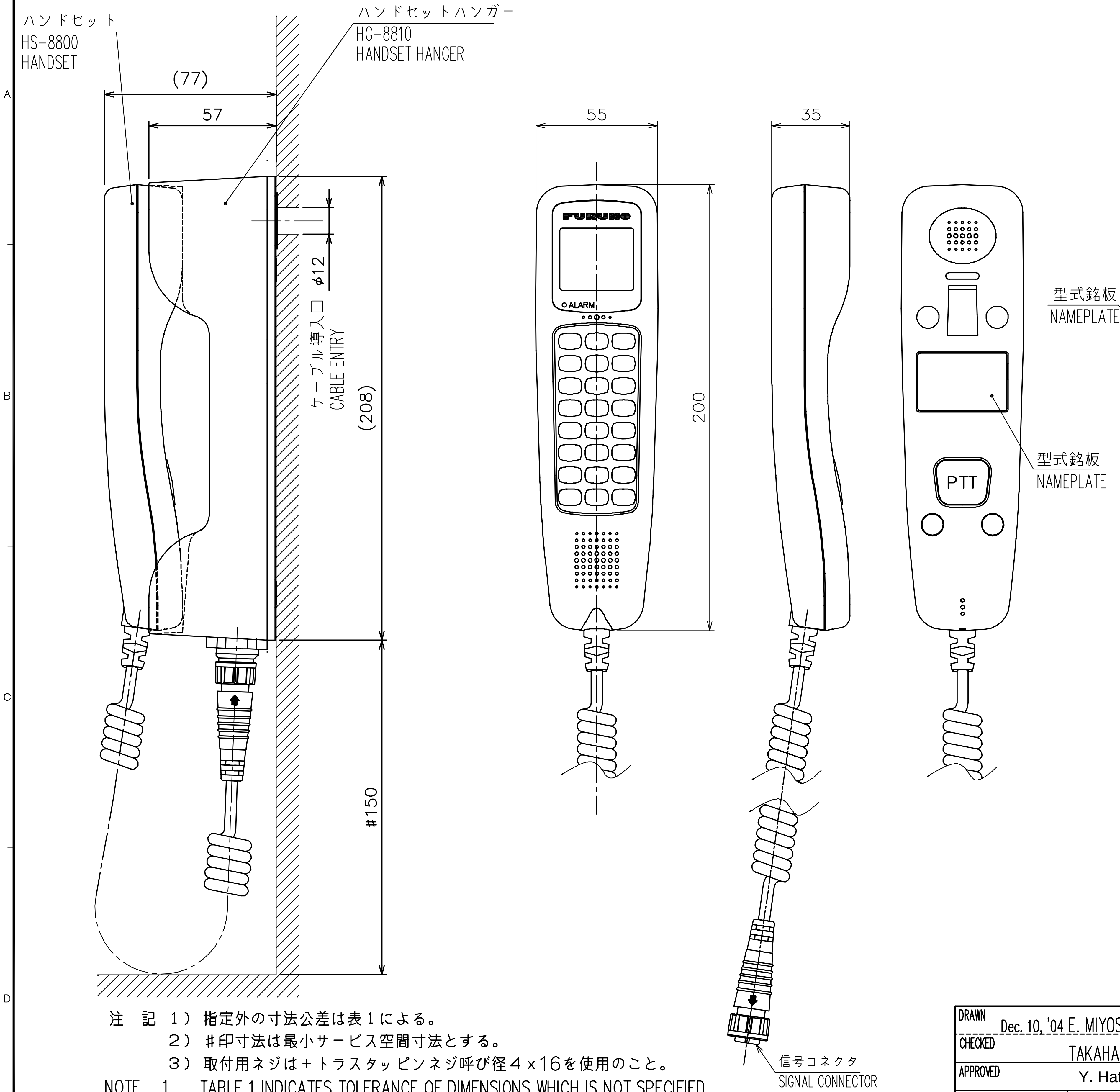
2）＃印寸法は最小サービス空間寸法とする。

3）取付用ネジは＋トラスタッピンネジ呼び径4×20を使用のこと。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE SELF-TAPPING SCREWS 4x20 FOR FIXING THE UNIT.

DRAWN	Dec. 6, '04 E. MIYOSHI		TITLE RB-8800
CHECKED	TAKAHASHI. T		名称 リモートステーション
APPROVED	Y. Hatai	FM-8800S/D	外寸図
SCALE 1/2	MASS 1.1 ±10% kg	質量はハンドセット・ハンガーを含む。 MASS W/ HANDSET AND HANGER	NAME REMOTE STATION
DWG.No.	C5642-G02- A	05-093-300G-3	OUTLINE DRAWING

D-8



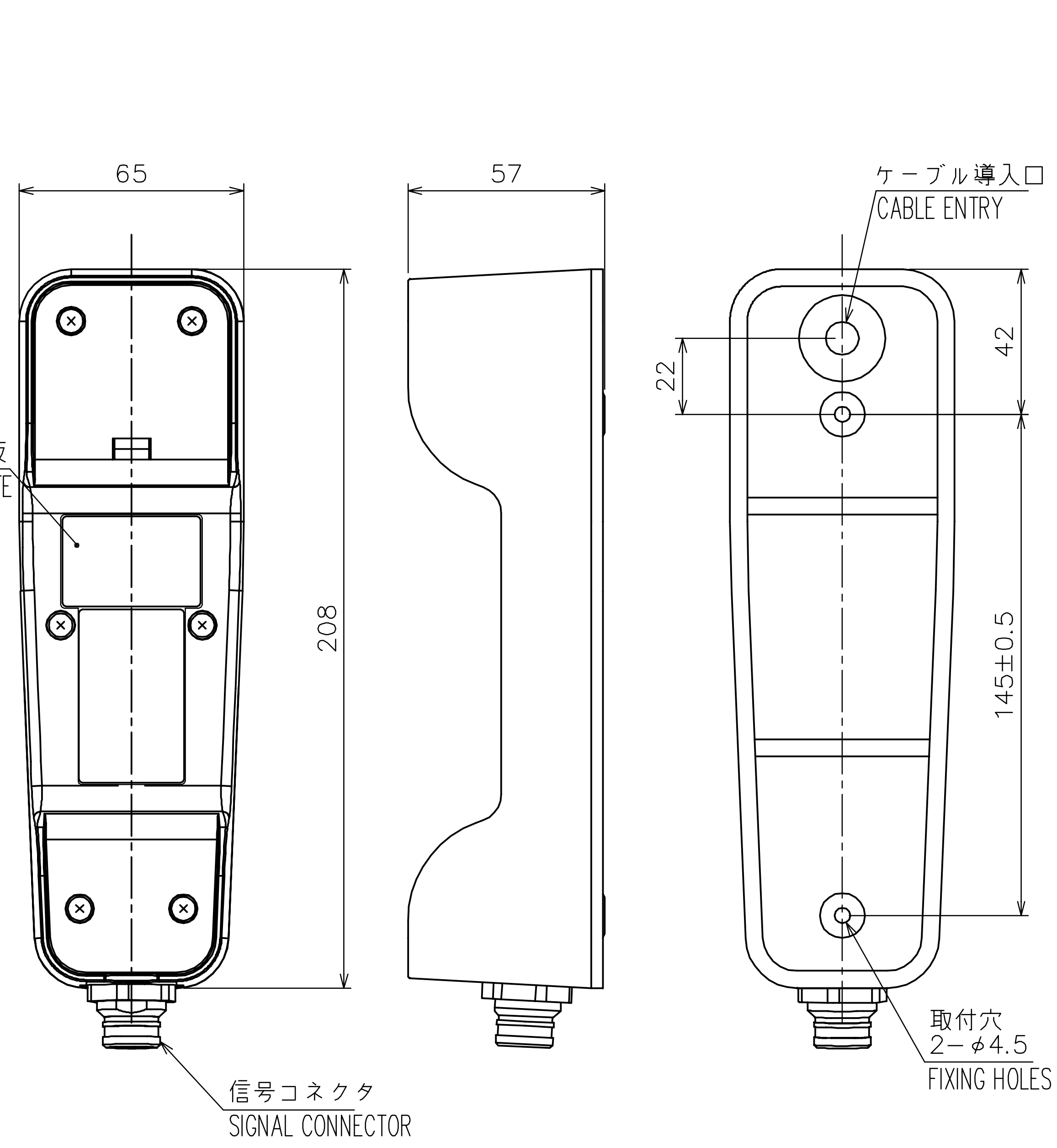


表 1 TABLE 1

寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３

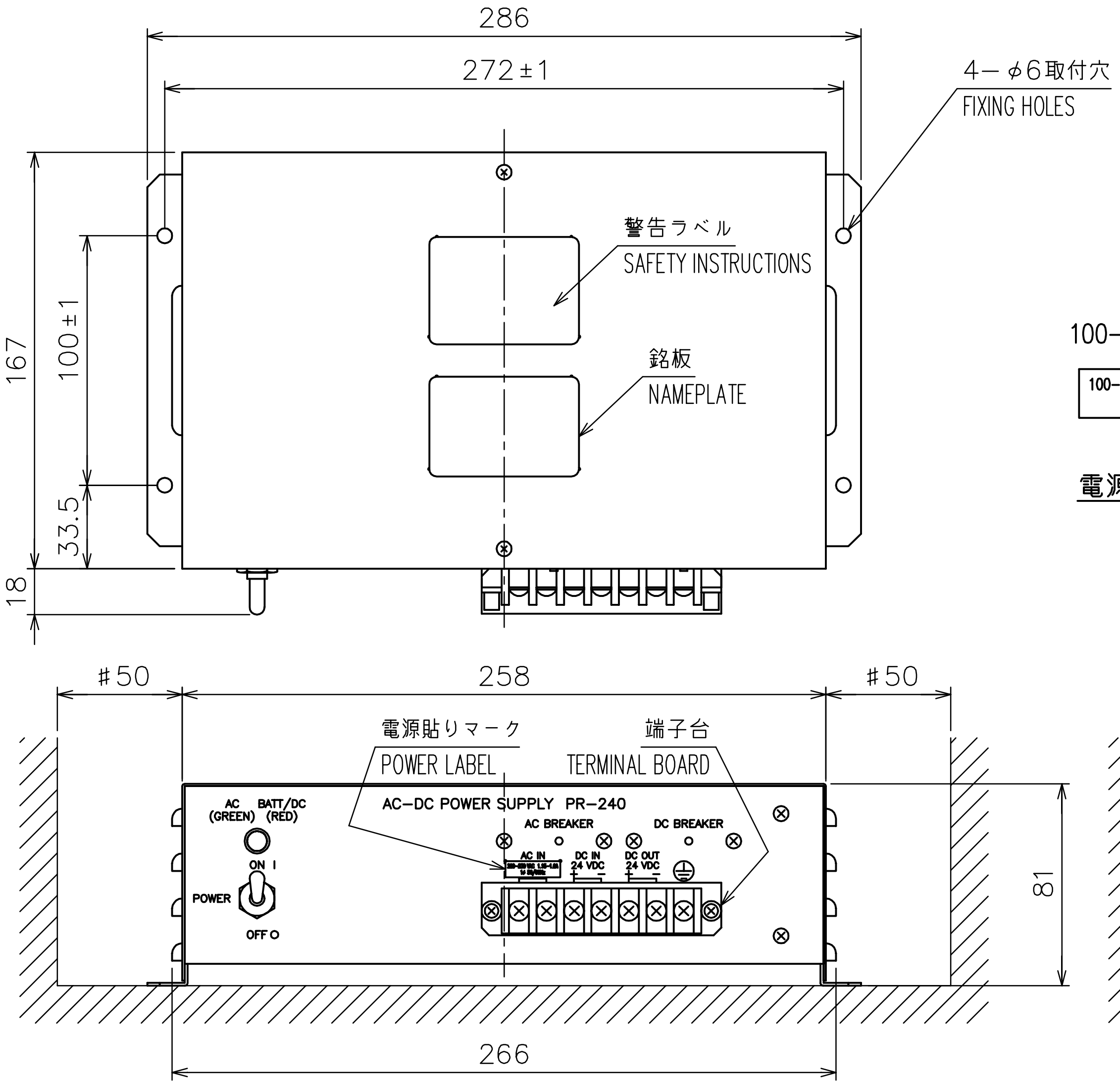
注　記　１）指定外の寸法公差は表１による。

２）＃印寸法は最小サービス空間寸法とする。

３）取付用ネジは＋トラスタッピンネジ呼び径４x１６を使用のこと。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE SELF-TAPPING SCREWS 4x16 FOR FIXING THE UNIT.

DRAWN	Dec. 10, '04 E. MIYOSHI		TITLE	RB-8810
CHECKED	TAKAHASHI. T		名称	リモートステーション
APPROVED	Y. Hatai	FM-8800S/D		外寸図
SCALE 1/2	MASS 0.7 ±10% kg	質量はハンドセット・ハンガーを含む。 MASS W/ HANDSET AND HANGER	NAME	REMOTE STATION
DWG.No.	C5642-G09- A	05-093-310G-2		OUTLINE DRAWING



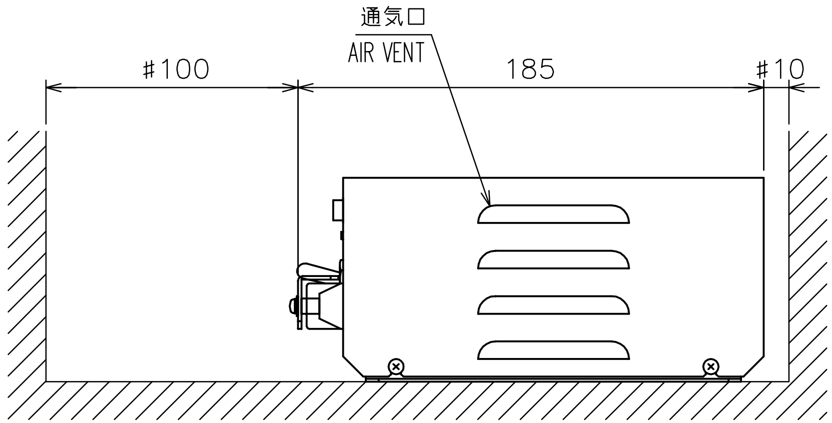


表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50＜L≦100	±2.5
100＜L≦500	±3

100-115 VACの時	200-230 VACの時
100-115 VAC 2.3-2.0A 1φ 50/60Hz	200-230 VAC 1.15-1.0A 1φ 50/60Hz

電源貼りマーク（尺度1：1）
POWER LABEL (SCALE 1:1)

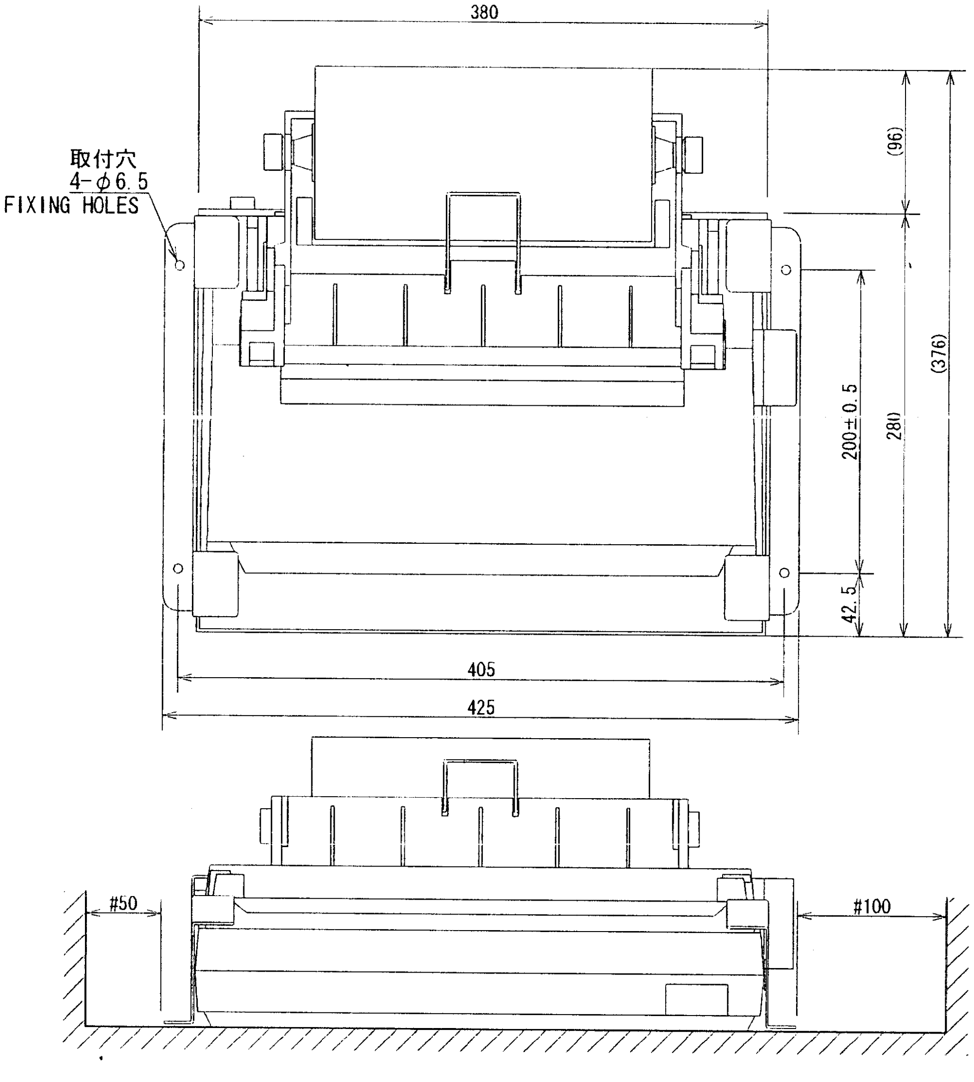
注　記　1）指定なき寸法公差は表1による。
2）#印寸法は推奨する最小サービス空間寸法とする。
3）取付用ネジは＋トラスタッピンネジ 呼び径4×16を使用のこと。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS 4x16 FOR FIXING THE UNIT.

DRAWN Mar. 3 '04 T.YAMASAKI		TITLE PR-240-CE
CHECKED Mar. 3 '04 T.TAKENO		名称 AC/DC電源ユニット
APPROVED Mar.11'04 H.Hayashi		外寸図
SCALE 1/3	MASS 2.8 ±10% kg	NAME AC/DC POWER SUPPLY UNIT
DWG No. C5003-G03- F	24-003-500G-3	OUTLINE DRAWING

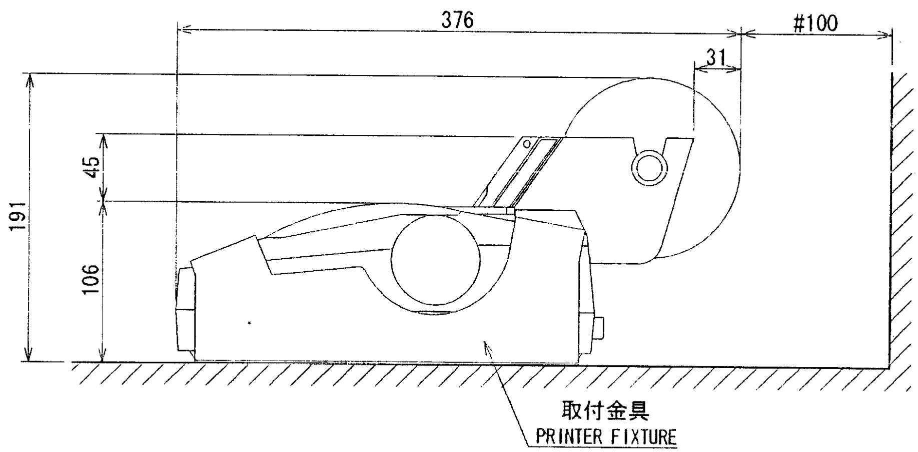
FURUNO ELECTRIC CO., LTD.

FURUNO



寸法区分 (mm) DIMENSION	公差 (mm) TOLERANCE
0 < L ≦ 50	±1．5
50 < L ≦ 100	±2．5
100 < L ≦ 500	±3

表 1
TABLE 1

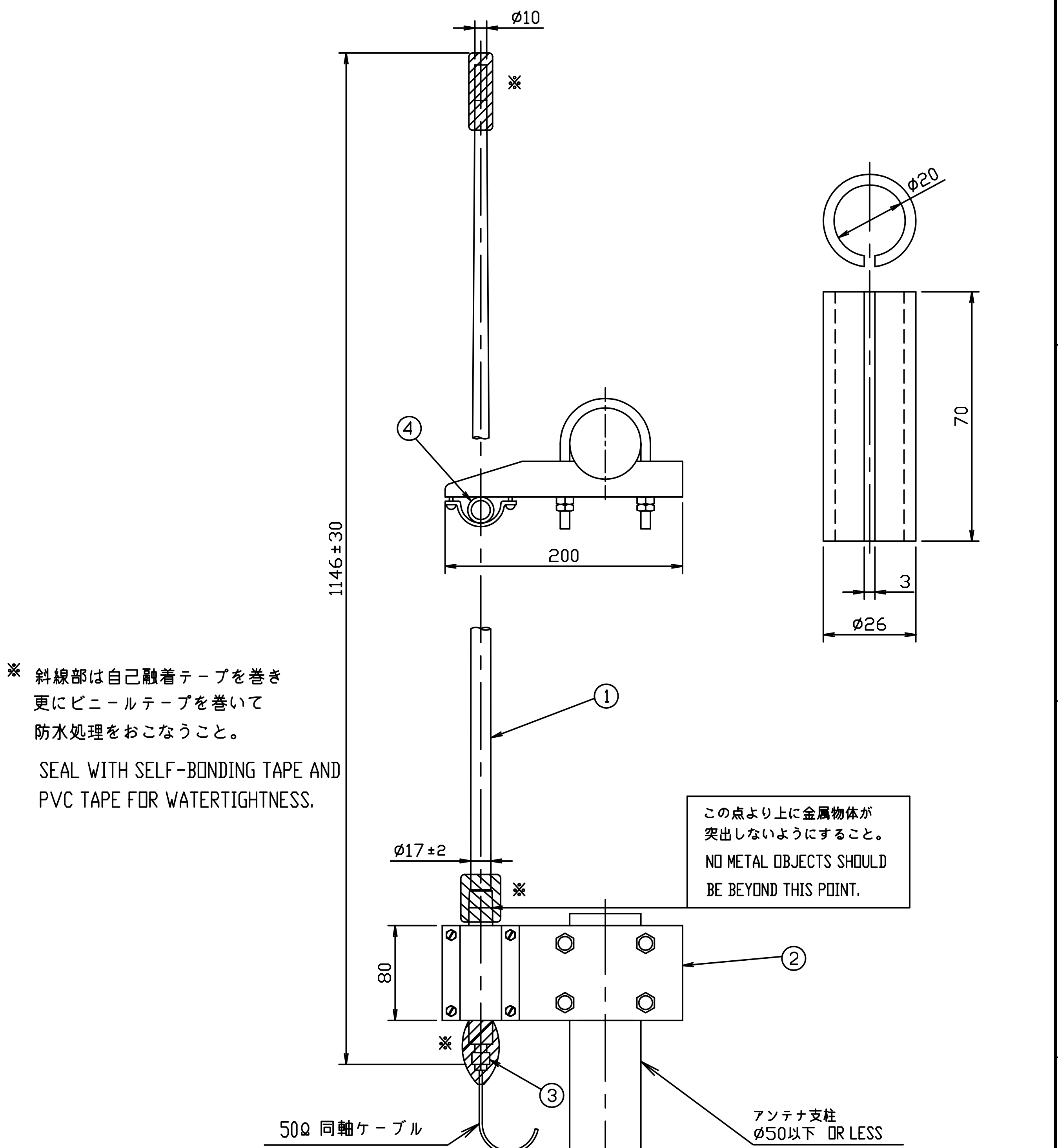


注　記　1）＃印寸法は最小サービス空間寸法とする。
2）指定外の寸法公差は表１による。
3）取付用ネジはＭ６ボルトまたはコーチボルト呼び径６を使用のこと。

NOTE
1. #: RECOMMENDED SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.
3. USE M6 BOLTS OR COACH BOLTS φ6 FOR FIXING UNIT.

DRAWN July 26 '00 T.YAMASAKI		TITLE	PP-510
CHECKED July 27 '00 Y.Koi		名称	プリンタ
APPROVED July 27 '00 Y.Koi			外寸図
SCALE 1/5	MASS 3.8 ±10% kg	NAME	PRINTER
DWG. No. C5589-G08- H	16-007-660G- 2		OUTLINE DRAWING

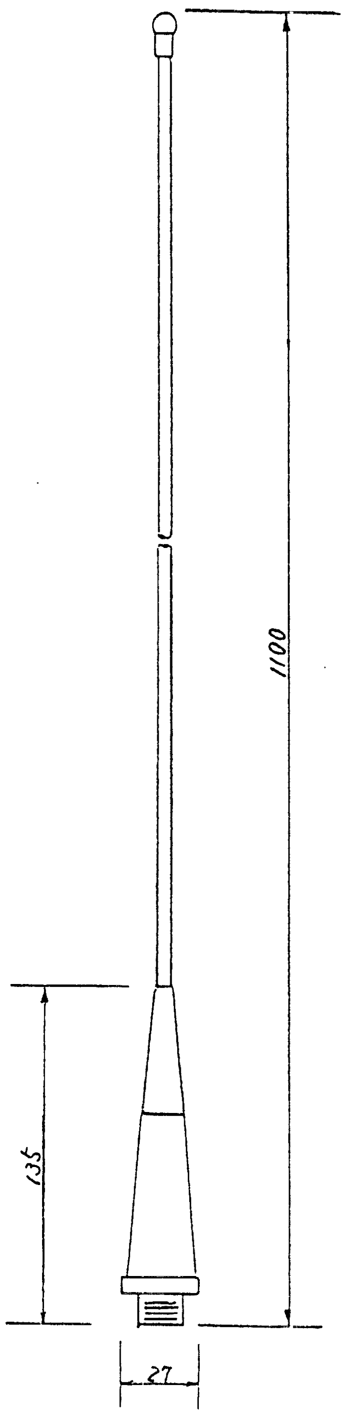
FURUNO ELECTRIC CO., LTD.

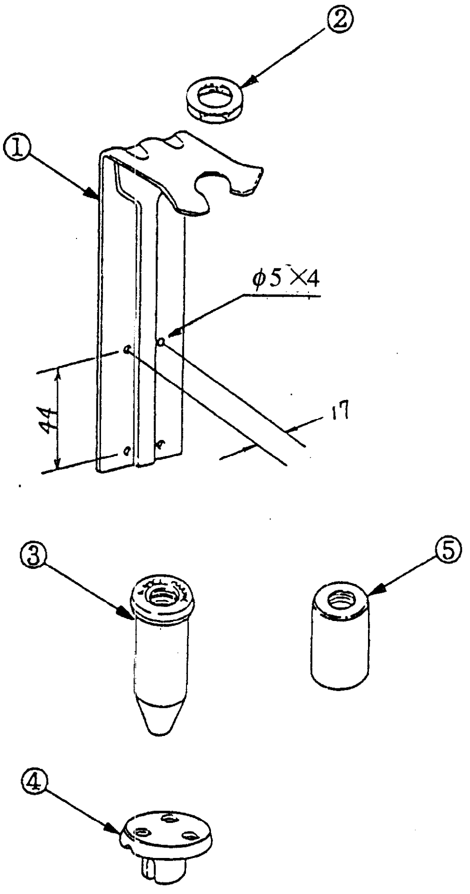


品番 ITEM	品名 NAME	材質 MATERIAL	数量 Q'TY	図番 DWG.No.	摘要 REMARKS
4	固定用パイプ LINER PIPE	硬質塩ビ VINYL CHLORIDE	1		
3	同軸コネクタ COAX. CONNECTOR		1		M-R
2	アンテナ取付金具 ANTENNA BRACKET	SUS	1 式 SET	4-310071	0.6kg
1	アンテナ棒 ANTENNA ELEMENT	FRP	1		0.25kg

DRAWN Feb. 1 '05 T.YAMASAKI		TITLE	FAB-151D
CHECKED Feb. 1 '05 T.MATSUGUCHI		名称	150MHz ホイップアンテナ
APPROVED Feb.02'05 T.Matsuguchi			外寸図
SCALE 1/5	MASS 0.85 kg ±10%	NAME	150MHz WHIP ANTENNA
DWG.No. C5013-019- J	4-110718		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.



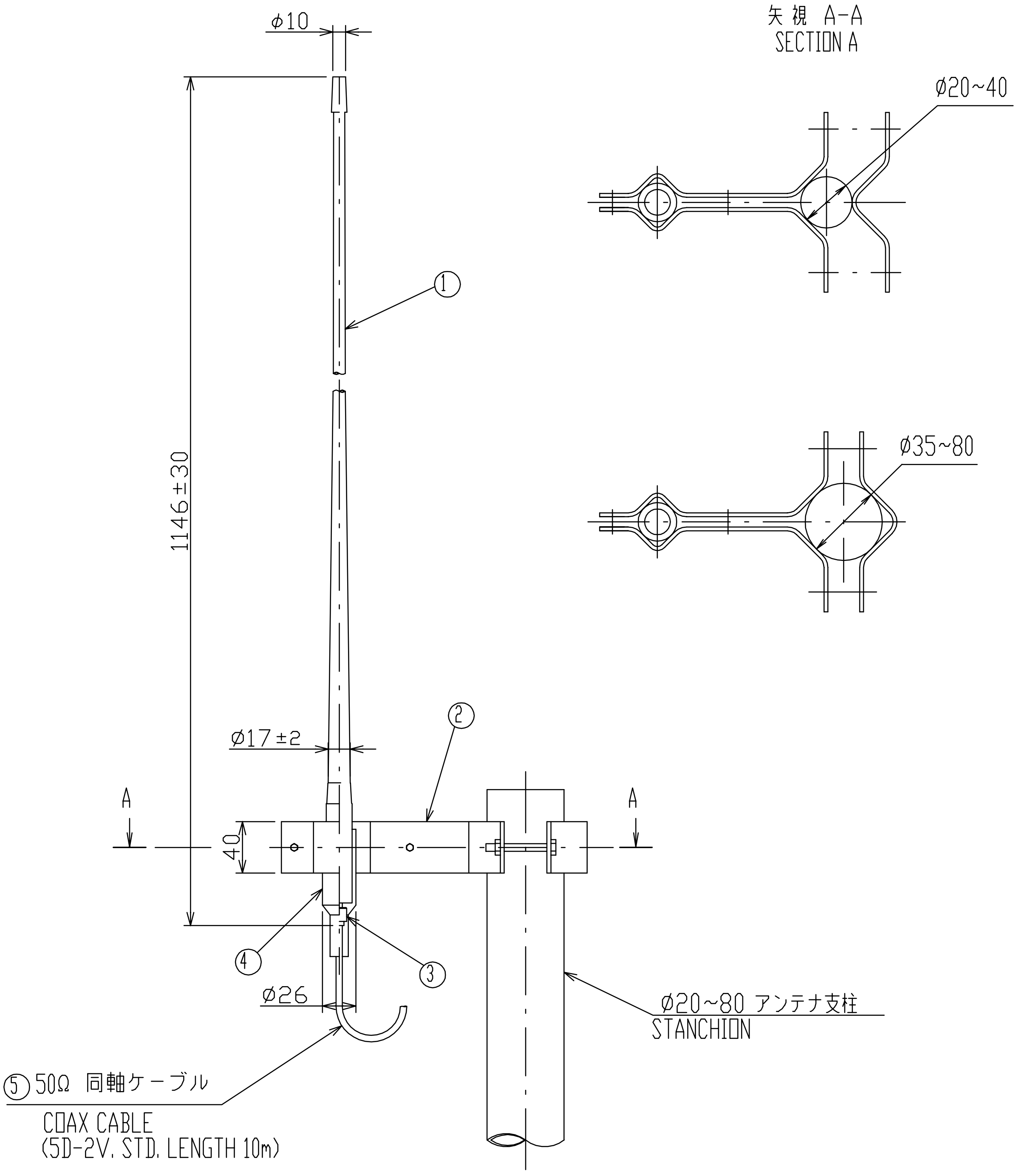


	品名 NAME	数量 Q'TY
1	アンテナ取付組品 ANTENNA BRACKET	1
2	固定ナット NUT	1
3	防滴カバー WATERPROOFING COVER	1
4	グランド GLAND	1
5	アダプタ ADAPTER	1

付属品；M型コネクタ付同軸ケーブル組品(05S9014, 5 m)

Antenna RA106 comes with a coax cable assembly (05S9014, 5 m) which has an M-type connector attached.

DRAWN Nov, 13. '95 T. NISHINO			TYPE RA106
CHECKED Nov. 13 '95 K. Okamoto			名称 150MHzアンテナ外観図
APPROVED Nov. 13 '95 K. Okamoto	FM-2678 FM-8500		外寸図
SCALE ∞ / MASS — kg	APPLICABLE TO: (MODEL)	BLOCK NO.	NAME VHF MARINE ANTENNA
DWG NO. C5603-G02- A	05-001-4354- 0		OUTLINE DRAWING



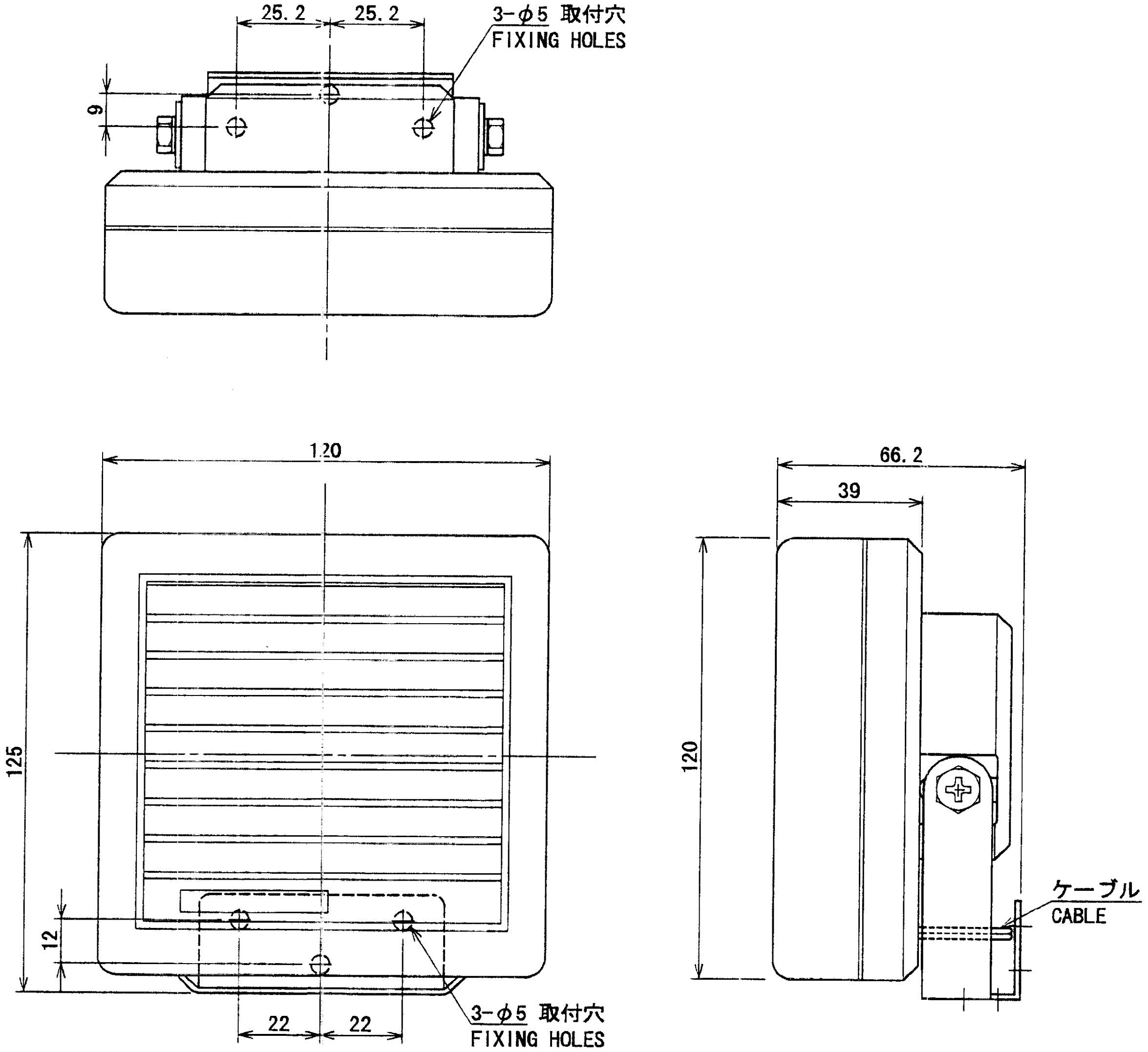
品番 ITEM	品名 NAME	材質 MATERIAL	数量 Q'TY	図番 DWG.No.	摘要 REMARKS
5	同軸ケーブル 50Ω COAX. CABLE		10m	5D-2V	
4	塩ビキャップ CONNECTOR CAP		1		
3	同軸コネクタ COAX. CONNECTOR		2	M-P-5	
2	アンテナ取付金具 ANTENNA BRACKET		1 式 SET		t2
1	アンテナ棒 ANTENNA ELEMENT	FRP	1	150M-W2VN	0.25kg

DRAWN	Nov. 26 '03 T.YAMASAKI
CHECKED	Nov. 26 '03 T.TAKENO
APPROVED	Nov.28'03 T. Matsuguchi
SCALE	1/5
MASS	0.7 kg ±10%
DWG.No.	C5011-042- C
TITLE	150M-W2VN
名称	150MHzホイップアンテナ 外寸図
NAME	150MHz WHIP ANTENNA OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

表１　TABLE 1

寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 ＜ L ≦ 50	±1.5
50 ＜ L ≦ 100	±2.5
100 ＜ L ≦ 500	±3



注記

1）指定なき寸法公差は表１による。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

DRAWN May 23 '01 T. YAMASAKI	TITLE	SEM-21Q
CHECKED May 24 '01 T. Kimi	名称	スピーカ
APPROVED May 24 '01 Y. Kimi		外寸図
SCALE 1/2 / MASS 0.54 kg ±10% / 質量は2.8mケーブルを含む MASS W/ 2.8m CABLE	NAME	LOUDSPEAKER
DWG. No. C5016-G07- A		OUTLINE DRAWING

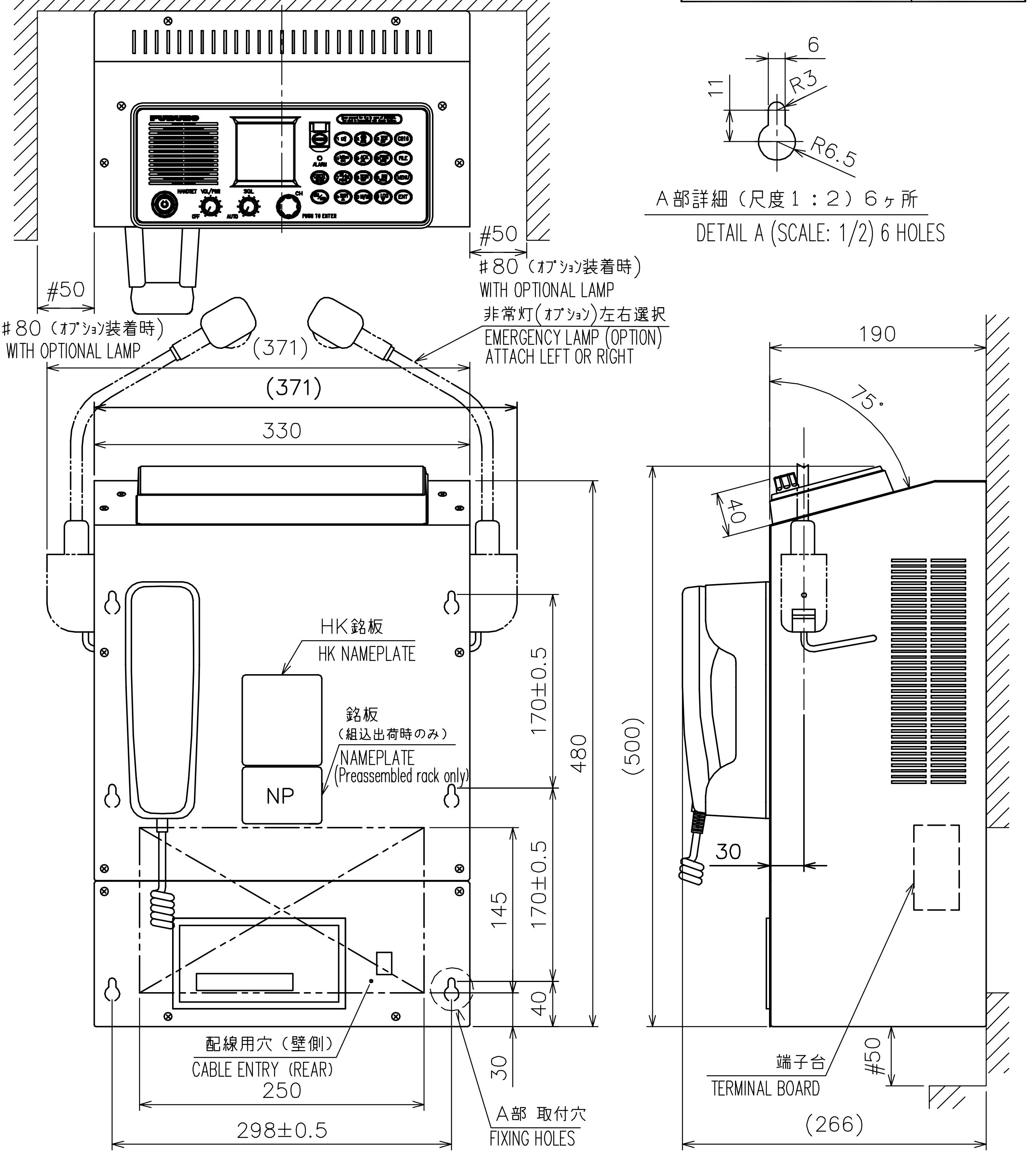
FURUNO ELECTRIC CO., LTD.

注記
1） 指定外の寸法公差は表１による。
2） ＃印寸法は最小サービス空間とする。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.

表１ TABLE 1

寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３
５００＜Ｌ≦１０００	±４



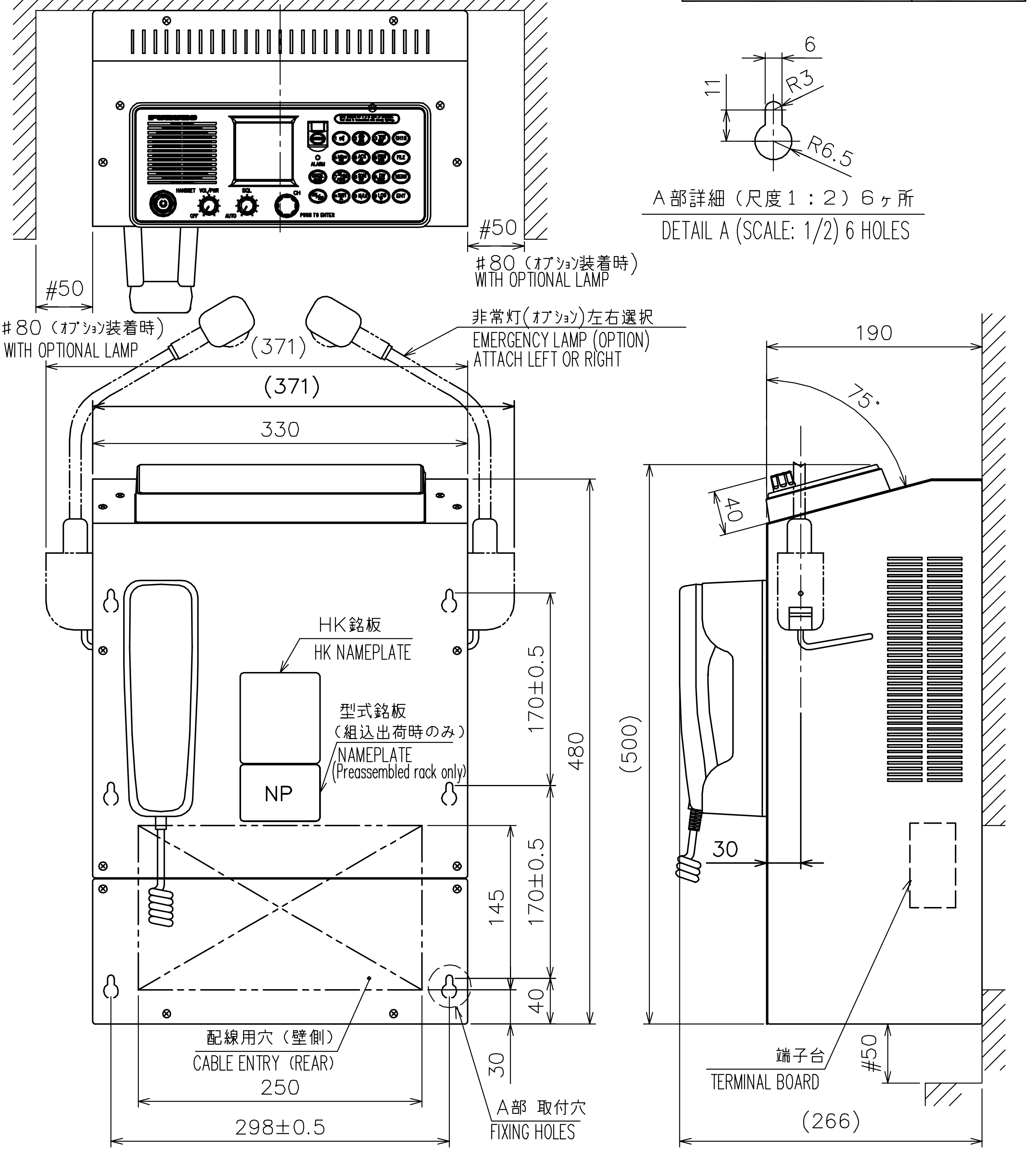
DRAWN Oct. 11, '05	E.MIYOSHI		TITLE	RC-8800
CHECKED	TAKAHASHI.T		名称	コンソールキット（壁掛ラック、プリンタ付）
APPROVED	Y. Hatai	FM-8800D/S		外寸図
SCALE 1/5	MASS 17.0 kg ±10%	質量はプリンタを含む。 MASS INCLUDES PRINTER.	NAME	CONSOLE KIT (RACK W/PRINTER)
DWG.No.	C5642-G05- C	REF.No. 05-093-700G-5		OUTLINE DRAWING

注記
1） 指定外の寸法公差は表１による。
2） ＃印寸法は最小サービス空間とする。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.

表１ TABLE 1

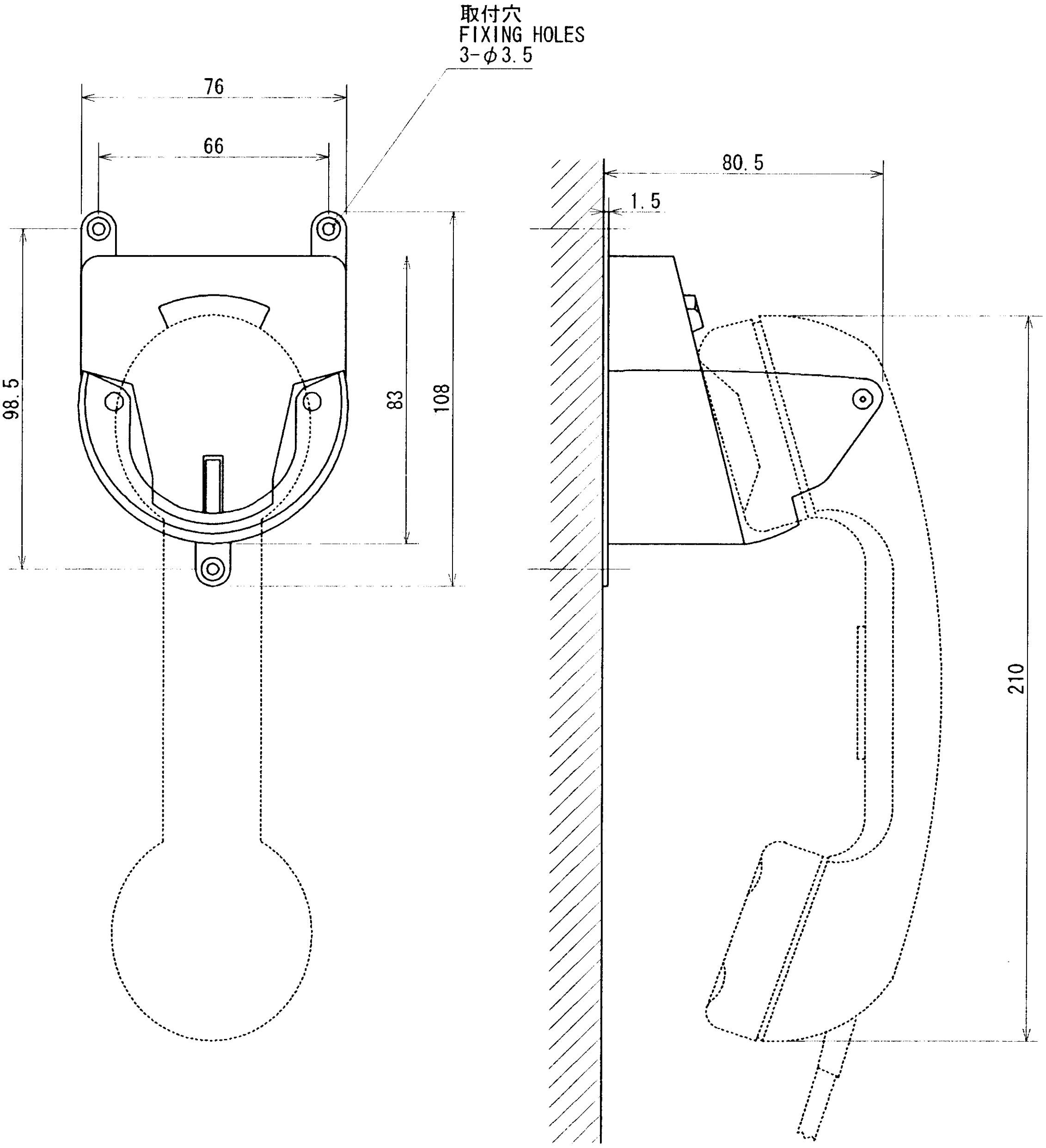
寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０＜Ｌ≦１００	±２．５
１００＜Ｌ≦５００	±３
５００＜Ｌ≦１０００	±４



DRAWN Oct. 11, '05 E.MIYOSHI		TITLE	RC-8800
CHECKED TAKAHASHI.T		名称	コンソールキット（壁掛ラック、プリンタ無し）
APPROVED Y. Hatai	FM-8800D/S		外寸図
SCALE 1/5	MASS 15.0 ±10% kg	NAME	CONSOLE KIT (RACK W/O PRINTER)
DWG.No. C5642-G07- C	REF.No. 05-093-710G-1		OUTLINE DRAWING

1 2 3

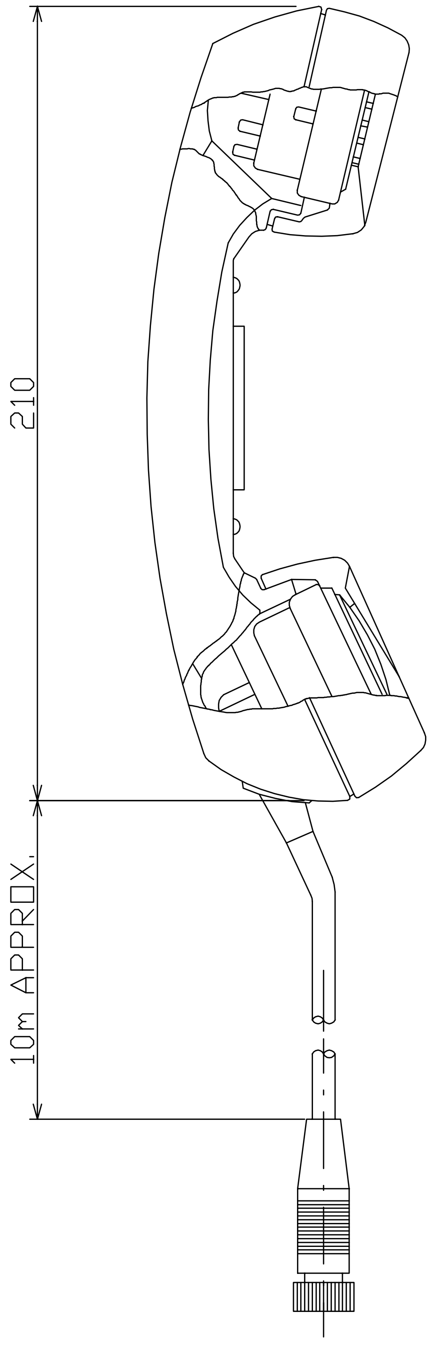
A B C D

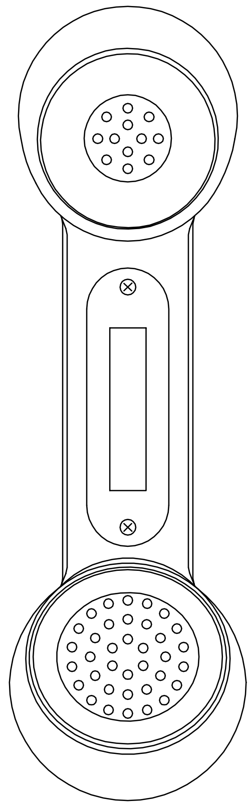


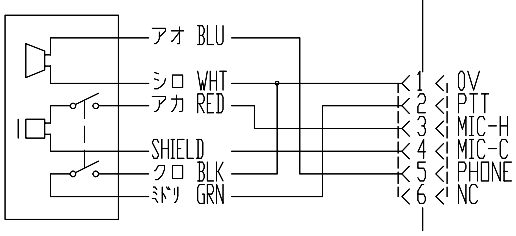
DRAWN Aug 16 '00 T. YAMASAKI		TITLE	AP-102
CHECKED Aug 16 '00 Y. Ki		名称	ハンドセットハンガー
APPROVED Aug 16 '00 Y. Ki			外寸図
SCALE 1/2	MASS 0.5 kg	NAME	HANDSET HANGER
DWG. No.	C5015-G05-B		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO



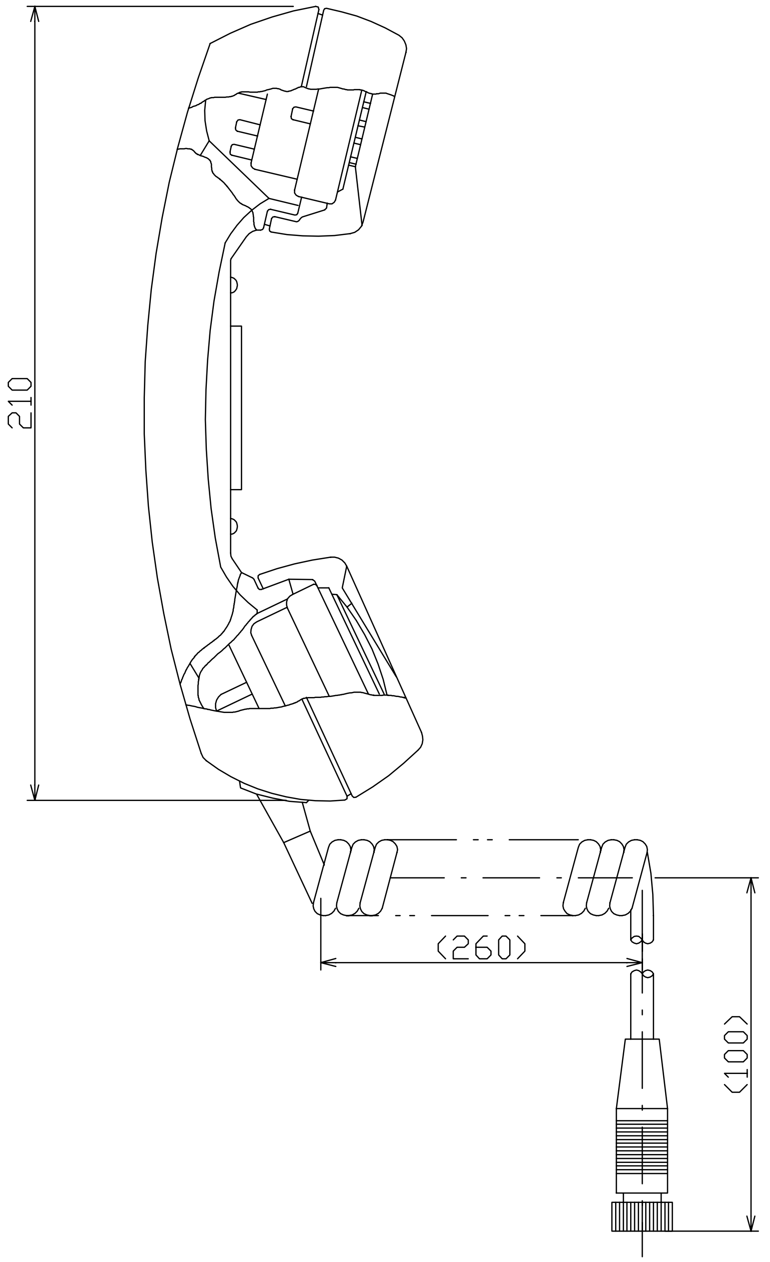


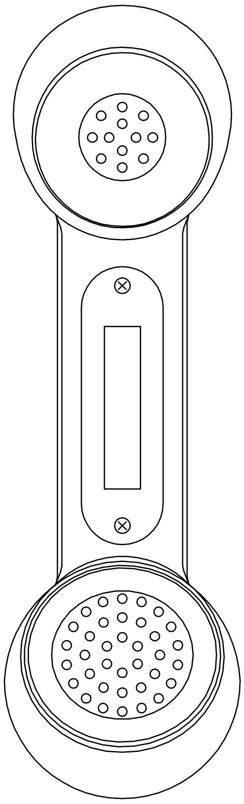


材質 MATERIAL	ＡＢＳ樹脂 ABS RESIN
色 COLOR	黒 BLACK

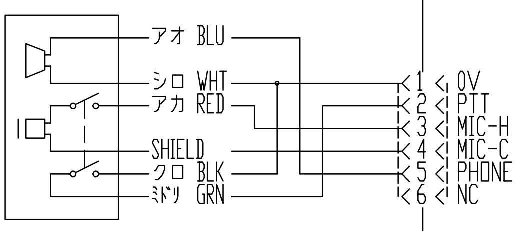
DRAWN Dec. 22 '03 T.YAMASAKI	TITLE	HS-6000FZ11
CHECKED Dec. 22 '03 T.TAKENO	名称	ハンドセット
APPROVED Dec.26'03 T. Matsuguchi		外寸図
SCALE 1/2 MASS 0.5 kg	NAME	HANDSET
DWG.No. C5015-G11- A		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.





回路図 SCHEMATIC DIAGRAM



材質 MATERIAL	ＡＢＳ樹脂 ABS RESIN
色 COLOR	黒 BLACK

DRAWN Dec. 22 '03 T.YAMASAKI		TITLE	HS-6000FZ5
CHECKED Dec. 22 '03 T.TAKENO		名称	ハンドセット
APPROVED Dec.26'03 T. Matsuguchi			外寸図
SCALE 1/2	MASS 0.3 kg	NAME	HANDSET
DWG.No. C5015-024- D			OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

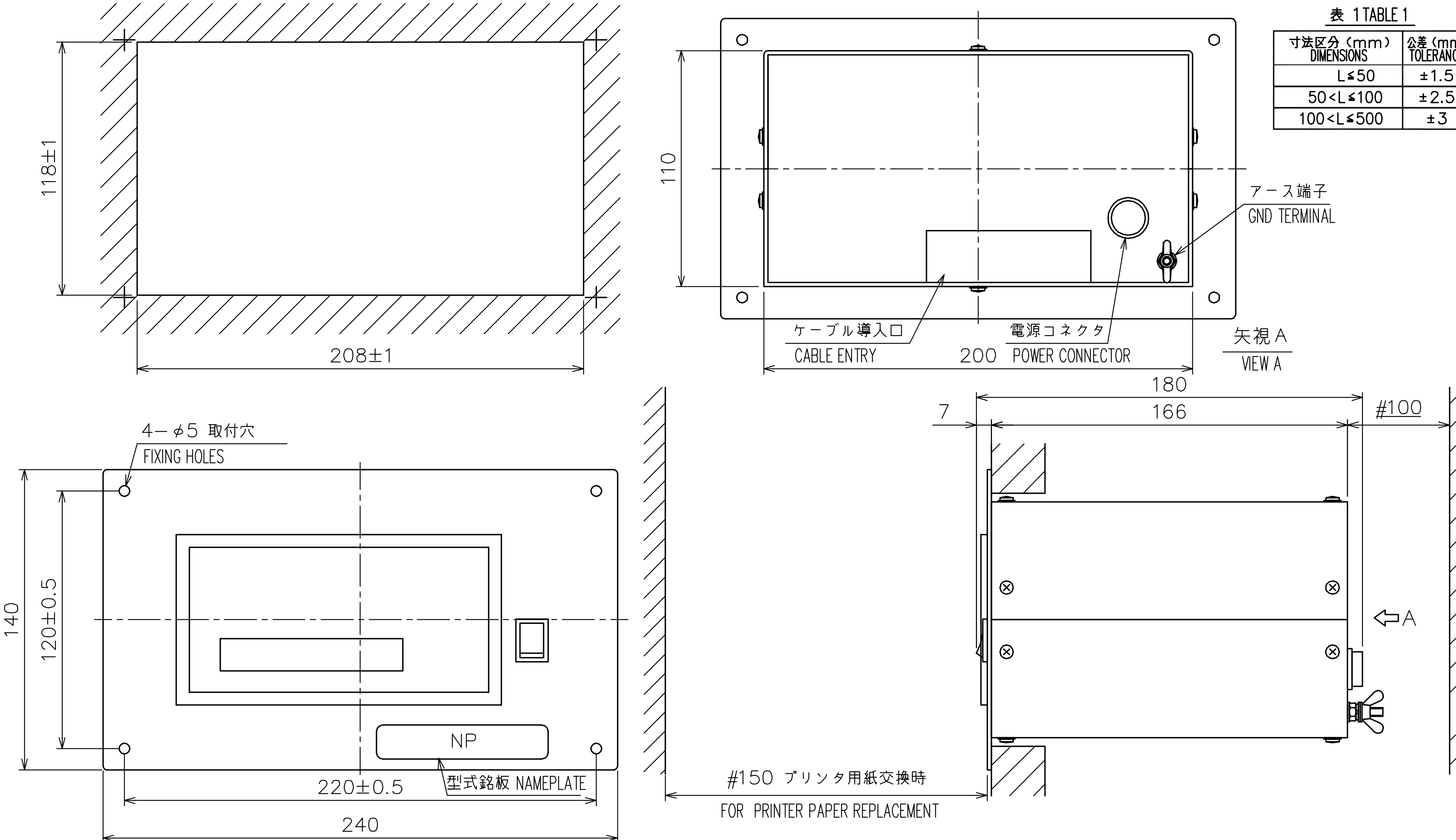


表 1 TABLE 1

寸法区分 (mm) DIMENSIONS	公差 (mm) TOLERANCE
L≤50	±1.5
50<L≤100	±2.5
100<L≤500	±3

注 記
1) #印寸法は最小サービス空間寸法とする。
2) 指定外の寸法公差は表1による。
3) 取付用ネジはトラスタッピンネジ呼び径4×16を使用のこと。

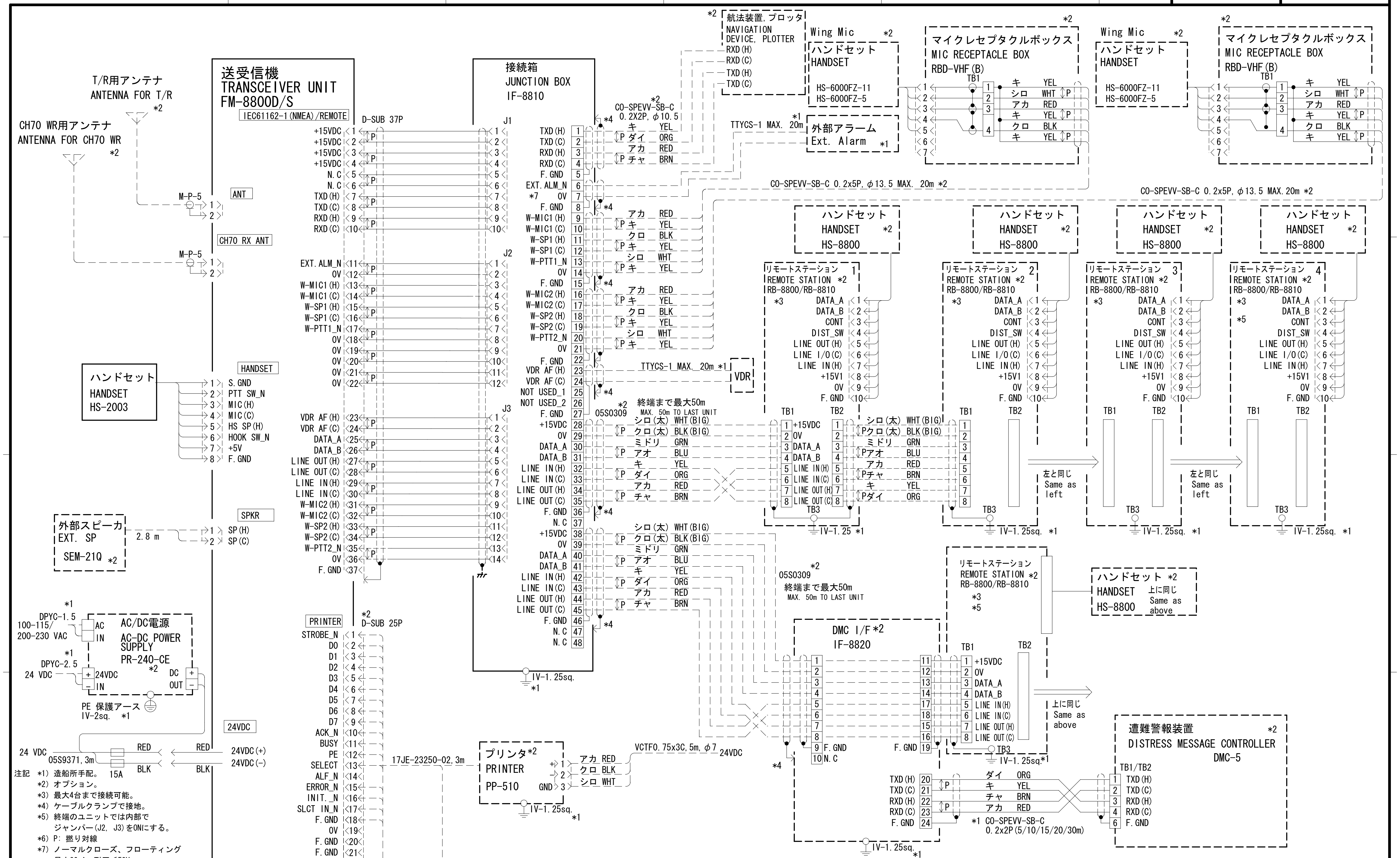
NOTE
1. #: MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE SELF-TAPPING SCREWS 4x16 FOR FIXING THE UNIT.

DRAWN	Apr. 28, '06 E. MIYOSHI	TITLE	PP-8800
CHECKED	TAKAHASHI. T	名称	プリンタ (埋込装備)
APPROVED	Y. Hatai	FM-8800S/D	外寸図
SCALE	1/2.5 MASS 2.0 ±10% kg	NAME	PRINTER (FLUSH MOUNT)
DWG.No.	C5642-G15- A	REF.No. 05-093-790G-1	OUTLINE DRAWING

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FURUNO

S-1

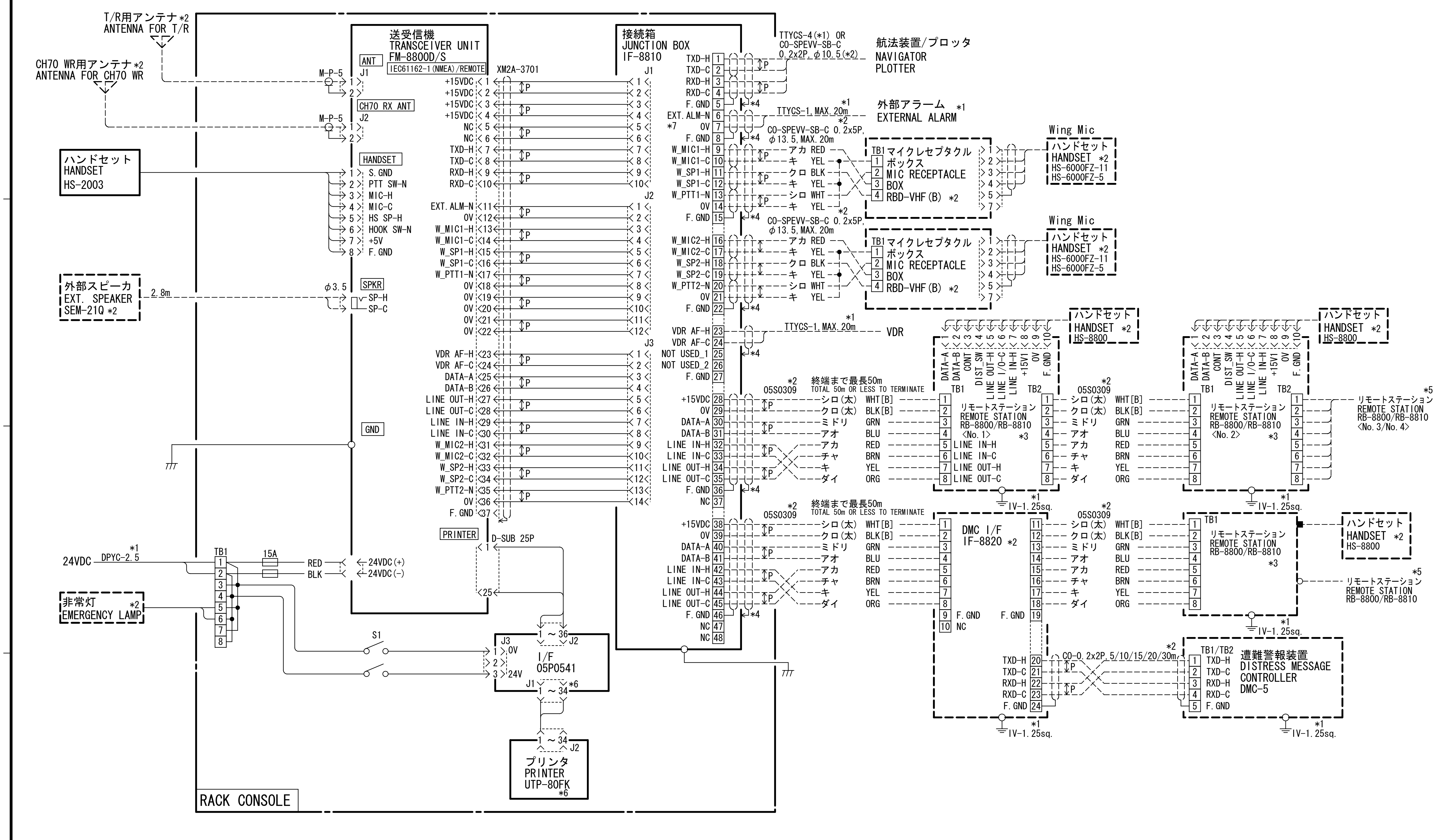


注記
*1) 造船所手配。
*2) オプション。
*3) 最大4台まで接続可能。
*4) ケーブルクランプで接地。
*5) 終端のユニットでは内部でジャンパー(J2, J3)をONにする。
*6) P: 撚り対線
*7) ノーマルクローズ、フローティング 最大80mA、耐圧≦50V。

NOTE
*1. SHIPYARD SUPPLY
*2. OPTION
*3. Max. 4 sets
*4. GROUND THROUGH CABLE CLAMP.
*5. CONNECT JUMPERS (J2 & J3) ON TERMINATED REMOTE STATION.
*6. P: TWISTED PAIR CABLE
*7. NORMAL CLOSE, FLOATING, MAX80mA, WITHSTAND VOLTAGE ≦50V.

DRAWN Jun. 9,'06	E.MIYOSHI	TITLE	FM-8800D/S
CHECKED	TAKAHASHI.T	名称	国際VHF無線電話装置
APPROVED	Y. Hatai		相互結線図
SCALE	MASS kg	NAME	VHF RADIOTELEPHONE
DWG No.	C5642-C01- J		INTERCONNECTION DIAGRAM

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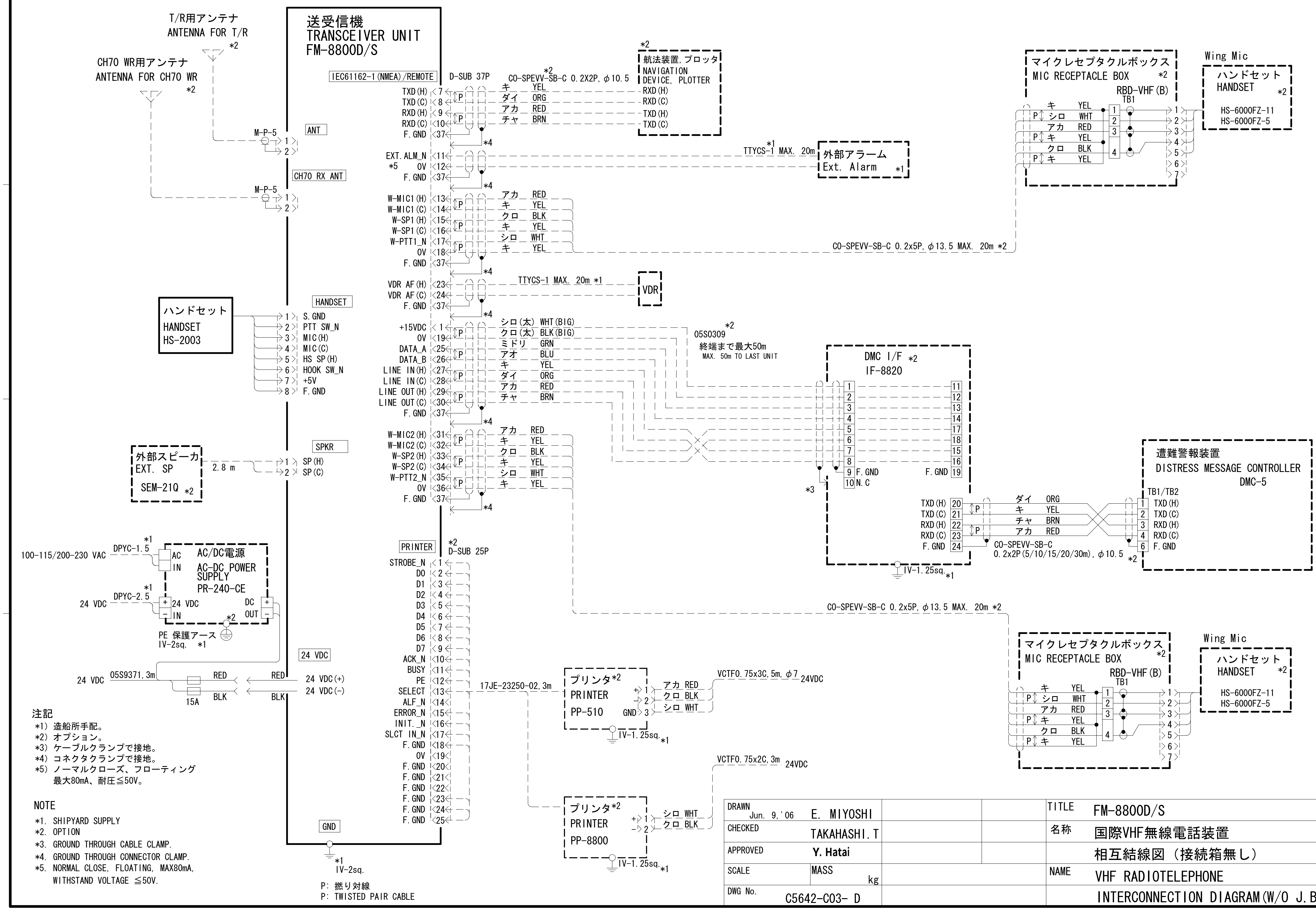


注記
*1) 造船所手配。
*2) オプション。
*3) 最大4台まで接続可能。
*4) ケーブルクランプで接地。
*5) 終端ユニットは内部のジャンパー (J2, J3) をONにする。
*6) プリンタ有の場合
*7) ノーマルクローズ、フローティング、最大80mA、耐圧≦50V。

NOTE
*1. SHIPYARD SUPPLY
*2. OPTION
*3. MAX. 4 SETS AVAILABLE
*4. GROUND THROUGH CABLE CLAMP.
*5. CONNECT JUMPERS (J2 & J3) ON TERMINATED REMOTE STATION.
*6. IN CASE OF "W/PRINTER"
*7. NORMAL CLOSE, FLOATING, MAX80mA, WITHSTAND VOLTAGE ≦50V.

DRAWN Jun. 9, '06	E. MIYOSHI	TITLE	RC-8800 (FM-8800)
CHECKED	TAKAHASHI. T	名称	国際VHF無線電話装置 (ラック組込)
APPROVED	Y. Hatai		相互結線図
SCALE	MASS kg	NAME	VHF RADIOTELEPHONE (RACK CONSOLE)
DWG No.	C5642-C02- D		INTERCONNECTION DIAGRAM

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注記
*1) 造船所手配。
*2) オプション。
*3) ケーブルクランプで接地。
*4) コネクタクランプで接地。
*5) ノーマルクローズ、フローティング
最大80mA、耐圧≦50V。

NOTE
*1. SHIPYARD SUPPLY
*2. OPTION
*3. GROUND THROUGH CABLE CLAMP.
*4. GROUND THROUGH CONNECTOR CLAMP.
*5. NORMAL CLOSE, FLOATING, MAX80mA, WITHSTAND VOLTAGE ≦50V.

DRAWN Jun. 9,'06	E. MIYOSHI	TITLE	FM-8800D/S
CHECKED	TAKAHASHI.T	名称	国際VHF無線電話装置 相互結線図（接続箱無し）
APPROVED	Y. Hatai		
SCALE	MASS kg	NAME	VHF RADIOTELEPHONE INTERCONNECTION DIAGRAM(W/O J.B.)
DWG No.	C5642-C03- D		

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